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Water Quality Instructional Resources Information System (IRIS): A Compilation of Abstracts to Water Quality and Water Resources Materials. Supplement IV (1980)

Ohio State Univ., Columbus

Prepared for

National Training and Operational
Technology Center, Cincinnati, OH

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U.S. Department of Commerce
National Technical Information Service
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EPA Information Dissemination Project
1200 Chambers Road - Third Floor
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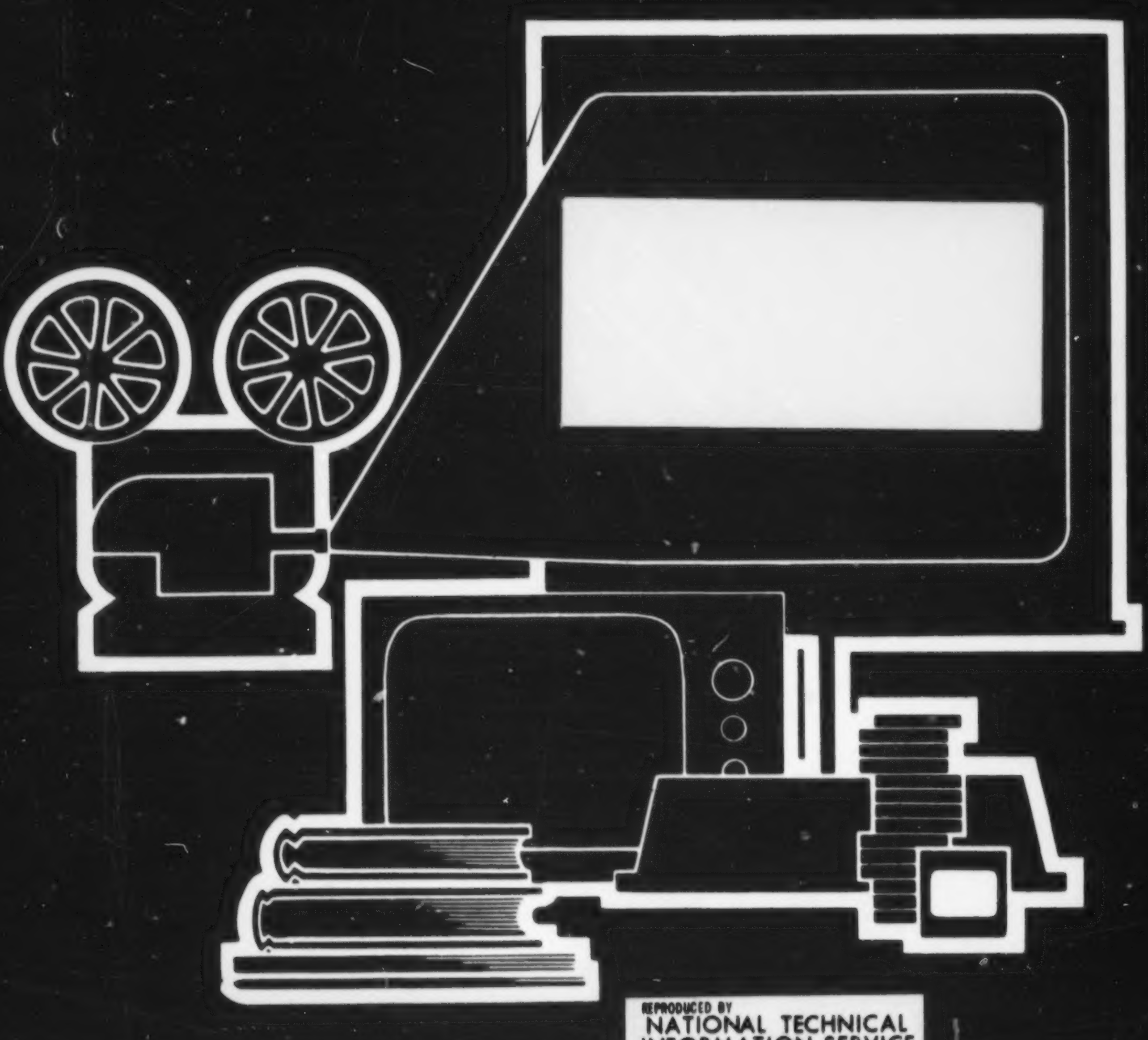
Water

Water Quality Instructional Resources Information System



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Presented are abstracts and indexes to selected print and non-print materials related to wastewater treatment, water quality, and water resources education and instruction. Entries are included from all levels of governmental sources, private concerns and educational institutions. Each entry includes: title, author, cross references, descriptors, and availability. Also included are procedures illustrating how instructors and program developers in the water quality control field can locate instructional materials to meet their needs. (BT)

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WATER QUALITY INSTRUCTIONAL RESOURCES INFORMATION SYSTEM (IRIS)

A Compilation of Abstracts to Water Quality and Water Resources Materials

Supplement IV (1980)
October, 1980

Compiled by the staff of the
EPA Information Dissemination Project
SMEAC Information Reference Center
1200 Chambers Road - 3rd Floor
Columbus, Ohio 43212

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Sponsored by the United States Environmental Protection Agency, Office of Water Program Operations, National Training and Operational Technology Center, Cincinnati, Ohio and the SMEAC Information Reference Center, College of Education, The Ohio State University.

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Preface

This publication contains abstracts and indexes to selected materials related to wastewater treatment and water quality education and instruction. In addition, some materials related to pesticides, hazardous wastes, and public participation are included. Also included are procedures to illustrate how instructors and curriculum developers in the water quality control field can locate instructional materials to meet very general or highly specific requirements in their programs.

Supplements to this publication will be issued periodically.

For further information about these materials contact:

EPA Information Dissemination Project
1200 Chambers Road
Columbus, Ohio 43212

Telephone: (614) 422-6717

I. General Information about Materials in IRIS.

A. What types of materials are included in IRIS?

The EPA Information Dissemination Project (water) acquires, reviews, indexes, and announces both print (books, modules, units, etc.) and non-print (films, slides, video tapes, etc.) materials related to water quality and water resources education and instruction.

Materials selected must be available from some source for announcement. When materials are not readily available we attempt to make the materials available through some national information service for easier acquisition. In a few cases the EPA Information Dissemination Project is the source of the materials.

B. How are materials entered into IRIS?

We request that people assist us in locating materials for the system. If you have materials you believe to be useful to others, please send two copies if possible to the:

EPA Information Dissemination Project
1200 Chambers Road
Columbus, Ohio 43212

Materials are reviewed by the project staff. Availability of the material is checked, and the materials are abstracted and indexed. The abstract describes the contents of the material. The index terms (descriptors) are concepts or terms used to describe the contents and the form of the document. (See the Subject Index for a listing of those that have been used.) The index terms are useful for locating materials manually, such as with this compilation, and also by computer.

When items are processed they are entered on the IRIS (water) computer tape. This tape is maintained by the EPA Information Dissemination Project at The Ohio State University and is used for producing tapes for other information systems, publications, and for computer searches conducted at The Ohio State University.

C. How can a user locate materials in IRIS?

1. All materials placed in IRIS (water) Collection.

Materials entered into the IRIS (water) collection can be located in two ways: (1) by manual search of this compilation and similar ones to follow and (2) by computer.

The first compilation contained resumes of selected materials processed for the previous IRIS (water) collection and resumes of selected materials of items added to the IRIS (water) collection. A limited number of copies of the compilation in paper copy and microfiche are available free of charge as long as the supply lasts from the EPA Information Dissemination Project. After the free copies of the compilations are gone, copies will be available for purchase from the EPA Information Dissemination Project.

Quarterly updates of the compilation are available by subscription on a yearly basis beginning November, 1979. Information regarding an annual subscription to IRIS (water) Quarterly Compilations can be obtained by writing to the EPA Information Dissemination Project. A subscription to the quarterly supplements for 1979-80 is $12.00 (within the U.S.). Price to Canada is $14.00. Prices in other countries is $20.00. Separate quarterly supplements are $4.00 each.

The compilation and the quarterly supplements can be scanned and the subject index can be used for manual searches.

Computer tapes of the IRIS (water) collection can also be searched by both batch and on-line computer searches. The IRIS tapes are available for purchase from the SMEAC Information Reference Center. In addition, the IRIS tapes are available for searching through the Bibliographic Retrieval Services, Inc., (BRS). Any search service that currently subscribes to BRS is able to search the IRIS data base by on-line techniques. Individuals or agencies with computer terminals and telephone connection equipment can subscribe to BRS and do their own searches if they desire. Current plans are to update the IRIS tapes every three months.

Information regarding BRS may be obtained by writing or phoning BRS, Corporation Park, Building 702, Scotia, NY 12302, (518) 374-5011.

Plans are being made to mount IRIS tapes with other on-line vendors. Information regarding this service will be announced in a future EPA IRC Bulletin and in mailings from the EPA Information Dissemination Project.

2. Materials placed in the Educational Resources Information System (ERIC)

A number of the materials processed for the IRIS (water) system are entered into the ERIC system and announced in Resources in Education (RIE). Resources in Education (RIE) is published monthly and is available from:

Superintendent of Documents
U.S. Government Printing Office
Washington, DC 20402

The current price is listed in the most recent issue of RIE. Check if a college or university library close to you has a copy. If they do not contact the EPA Information Dissemination for assistance.

Many libraries subscribe to RIE. Materials announced in RIE can be searched manually each month by scanning RIE or by checking the index terms in the back of each issue. Materials announced in RIE can be searched by computer also. ERIC computer tapes may be purchased outright, but most users of the tapes gain access to them through three major database vendors, Lockheed (Dialog), Systems Development Corporation (Orbit), and Bibliographic Retrieval Services. For the addresses of search services in your state that can search these databases, contact the:

EPA Information Dissemination Project
1200 Chambers Rd., Room 310
Columbus, Ohio 43212

Most of the materials announced in RIE are available on microfiche (microfilm) at over 700 sites throughout the United States and the world. Users can view these materials on site at many locations to identify what they believe will be useful to them at no cost. Microfiche copies (or in most cases Xerox copies) can be ordered through the ERIC Document Reproduction Service. The address and order information is in the back of each issue of RIE. Xerox copies of many items related to water quality and resource education and training can also be ordered through the EPA Information Dissemination Project for 3¢ per page + $1.00 per document.

For information about locations of ERIC microfiche sites in your state, contact the EPA Information Dissemination Project.

A number of journal articles processed for the IRIS (water) system are entered into the ERIC system and announced in Current Index to Journals in Education (CIJE).

Current Index to Journals in Education is published monthly and is available from:

ORYX Press
3930 East Camelback Road
Phoenix, Arizona 85018

Many libraries subscribe to CIJE. Materials announced in CIJE can be searched manually each month by scanning CIJE or by checking the index terms in the back of each issue. Materials announced in CIJE can be searched by computer also. Refer to the previous discussion of RIE concerning computer searches.

Materials announced in CIJE can be located in journals at many university libraries.

Many of the articles can be obtained from University Microfilms. Current prices are $6.00 for articles published before January 1976 and $4.00 for articles published after January 1976. For further information write to:

UMI Article Reprint Department
300 North Zeeb Road
Ann Arbor, Michigan 48106

II. How to Use the Compilation

A. Description of Information in Resumes

Each resume is listed by EW number in numerical order in the resume section. Two samples of resumes are provided to explain the data fields in the resumes. Sample resume #1 is a sample resume of an item not entered in ERIC. Sample resume #2 is a sample resume of an item entered into ERIC; a few additional data elements are in these resumes and are explained.

1. Sample resume of materials not entered into ERIC

a. IRIS NUMBER: EW 005 093
b. PUBLICATION DATE: DEC 79
c. TITLE: SANITARY LANDFILLS, VOLUME 1. 1970-1977.
d. PERSONAL AUTHOR: HUNDEMANN, AUDREY S.
e. DESCRIPTOR: *ANNOTATED BIBLIOGRAPHIES; *BIBLOGRAPHIES; *ENERGY; *FUELS; LAND USE; *LANDFILLS; MONITORING; *REFUSE DISPOSAL; *SANITARY LANDFILLS; SITE SELECTION; *WASTE DISPOSAL; *WATER POLLUTION

f. DESCRIPTIVE NOTE: 272P. PRICE: $30.00, PB80-802838
g. ABSTRACT: CITATIONS OF WORLDWIDE REPORTS ON REFUSE DISPOSAL IN SANITARY LANDFILLS ARE PRESNETED. STUDIES COVERED ARE SITE SELECTION, REFUSE PROCESSING, EARTH MOVING EQUIPMENT, AND MONITORING. THE MAJORITY OF THESE ABSTRACTS ARE CONCERNED WITH WATER POLLUTION AND GAS EVOLUTION AT DISPOSAL LOCATIONS. THE RECOVERY OF LANDFILL GAS FOR USE AS A FUEL IS DISCUSSED. LANDFILL DISPOSAL OF HAZARDOUS MATERIALS IS EXCLUDED. (THIS UPDATED BIBLIOGRAPHY CONTAINS 272 ABSTRACTS, NONE OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION).

h. AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

a. IRIS NUMBER -- this is the identification number sequentially assigned to materials as they are processed. Gaps in numbers mean that some items have been deleted, are being processed to add new information, or have been delayed in processing for some reason.

b. PUBLICATION DATE -- date material was published according to information on the material.

c. TITLE

d. PERSONAL AUTHOR -- person or persons who wrote, compiled, or eidted the material. Up to two personal authors can be listed.

e. DESCRIPTOR -- subject terms which characterize substantive contents and form of the materials. The major terms are preceeded by an asterisk. Terms used to index all resumes in this compilation can be reviewed in the Subject Index.

f. DESCRIPTIVE NOTE -- various items of information may be contained in this section. For print materials the number of pages is usually listed.

g. ABSTRACT -- some early materials entered into IRIS did not have abstract information. All materials currently being entered into IRIS have an informative abstract that describes the contents of the item.

h. AVAILABILITY -- information in this field indicates where the material can be obtained and the price of the material quoted the last time information was received from the source. Please note: Prices of nearly all materials are subject to changes and may not be accurate at the time a person orders a specific item.

2. Sample resume of material entered into ERIC (Resources in Education)

Item entered into ERIC (Resources in Education) will have a few additional data fields.

IRIS NUMBER: EW002998
a. ERIC NUMBER: ED151236
PUBLICATION DATE: SEP 77
TITLE: CHLORINATION. TRAINING MODULE 2.300.2.77.
INSTITUTION CODE: BBB08399
SPONSORING AGENCY CODE: BBB15379; FGK21436
DESCRIPTOR: *CHEMISTRY; *INSTRUCTIONAL MATERIALS; *POST SECONDARY EDUCATION; SECONDARY EDUCATION; *TEACHING GUIDES; *UNITS OF STUDY; WATER POLLUTION CONTROL; *CHLORINATION; *WASTE WATER TREATMENT; WATER TREATMENT
b. EDRS PRICE: EDRS PRICE MF-$0.83 HC-$3.50 PLUS POSTAGE
DESCRIPTIVE NOTE: 60P. FOR RELATED DOCUMENTS, SEE SE 024 025-046
c. ISSUE: RIEJUL78
ABSTRACT: THIS DOCUMENT IS AN INSTRUCTIONAL MODULE PACKAGE PREPARED IN OBJECTIVE FORM FOR USE BY AN INSTRUCTOR FAMILIAR WITH CHLORINE. THE REASONS FOR CHLORINATION AND SAFE OPERATION AND MAINTENANCE OF GAS CHLORINE, DRY CALCIUM HYPOCHLORITE AND LIQUID SODIUM HYPOCHLORITE CHLORINATION SYSTEMS FOR WATER SUPPLY AND WASTEWATER TREATMENT FACILITIES ARE GIVEN. INCLUDED ARE OBJECTIVES, INSTRUCTOR GUIDES, STUDENT HANDOUTS AND TRANSPARENCY MASTERS. THE MODULE CONSIDERS PURPOSES OF CHLORINATION, PROPERTIES OF CHLORINE, METHODS OF CHLORINATION, SAFETY, MAINTENANCE OF CHLORINATION UNITS AND INTERPRETATION OF TEST RESULTS. (AUTHOR/RH)
d. INSTITUTION NAME: KIRKWOOD COMMUNITY COLL., CEDAR RAPIDS, IOWA.
SPONSORING AGENCY NAME: DEPARTMENT OF LABOR, WASHINGTON, D.C.; IOWA STATE DEPT. OF ENVIRONMENTAL QUALITY, DES MOINES.

a. ERIC NUMBER -- the ED number indicates the document has been processed and entered into Resources in Education. This identification number is the number to use when ordering a document or when requesting information about a document.

b. EDRS PRICE -- if material is available through the ERIC Document Reproduction Service, the price of the material when it was entered into the ERIC system and the form of the material is indicated. "MF" means microfiche; "HC" means Xerox copy. Prices are subject to change. Current prices of microfiche and paper copies are listed in the back of each issue of Resources in Education; consult the latest monthly issue for current prices. Information about ordering items can also be obtained by contacting:

ERIC Document Reproduction Service (EDRS)
P.O. Box 190
Arlington, Virginia 22210

Telephone: 703-841-1212

Items that are available on microfiche (MF) are contained in microfiche collections at over 700 sites where they can be read. For information on the microfiche locations in your state contact the EPA Information Dissemination Project.

c. ISSUE -- this indicates the monthly issue of Resources in Education in which the resume appeared.

d. INSTITUTION NAME -- organization where document originated.

B. How to Locate Desired Materials

Users can identify materials of interest by scanning the resume listings, or using the Subject Index, Author Index, Institution Index, or Title Index.

1. Subject Index

The Subject Index is designed to enable the user to search for information on either a broad subject or a narrow information concern. An EW number is included for each item listed under the subject heading. The EW number refers to the abstract entry in the resume section where complete bibliographic information, an abstract of the item, and availability information can be found.

A user can also coordinate a search by checking EW numbers that appear under two or more subject headings. For example, you could check all the EW numbers under Water Treatment and all the EW numbers under Films. EW numbers included under both subject headings would include information relevant to Water Treatment that were films. EW numbers under wastewater treatment and laboratory techniques would provide a list of materials related to laboratory techniques and to wastewater treatment. Similar techniques could be used to identify other information desired.

Users with ERIC microfiche should check the resume entry. If the document is available on microfiche from the ERIC Document Reproduction Service, the availability will be indicated by "MF" on the resume by "EDRS Price." This means libraries with ERIC microfiche collections should have the document on microfiche.

If you want a document available through the ERIC Document Reproduction Service (EDRS) see the section on ordering documents.

2. Author Index

If you desire to locate a document by the name of the author, you can use the Author Index. EW numbers are provided under the author in the Author Index as in the Subject Index. Some documents do not have a listed author; hence they are not listed in this index.

3. Title Index to the IRIS Compilation (Not included in the compilation)

The Title Index to the IRIS Compilation is a separate document. It is available from the EPA Information Project for $5.00 prepaid or $5.00 plus postage if invoiced. Supplements will be available on an annual basis for $5.00 beginning in January, 1981.

The Title Index contains all titles in the compilation listed in alphabetical order. If you are searching for material and know the title, you can check the title list to determine if the item is in the IRIS data base. Each title includes the IRIS resume number. The number can be found in the resume section of the compilation.

III. Correcting an Existing IRIS Record

The IRIS data base will be updated on a quarterly basis. Corrections will be made to the data base at those times. You can help improve IRIS by sending corrections for items you find to be in error.

We request that you duplicate (copy) the resume from the compilation, mark the information you believe to be wrong (or incomplete), and send the marked resume to:

EPA Information Dissemination Project
1200 Chambers Road, Rm. 310
Columbus, OH 43212

Corrections of errors will occur in the IRIS tapes at the next update after comments are received.

If you have difficulty obtaining materials from the listed source in the AVAILABILITY section of the resume, please let us know. We will contact the souces to verify whether the materials are available, but your assistance will provide corrections between annual availability checks.

If you are the supplier of materials in IRIS, please let us know if you remove a product from your list, modify a product on your list, or change the price of the product.

IV. Requests to Receive Information about IRIS and the IRC Bulletin

Information regarding IRIS, materials in IRIS, and modifications in the system will be announced in the IRC Bulletin. The Bulletin is issued about six times a year as information is available.

If you are not on the mailing list write to the EPA Information Dissemination Project. Limited numbers of some back issues are still available.

If you need information about IRIS you can also phone 614-422-6717 with your questions.

V. Requests for Assistance in Using IRIS

A. Assistance in use of IRIS manuals.

If you need help in using the IRIS manuals phone 614-422-6717 or write to the EPA Information Dissemination Project. Staff are normally available from about 8:30 a.m. to 4:30 p.m. Eastern time to answer your questions.

B. Assistance in accessing IRIS by computer

1. Conducting searches.

   See section VIII.

2. Subscribing to BRS, Inc. for computer searching of IRIS

   Contact: Bibliographic Retrieval Services, Inc.
   Corporation Park, Building 702
   Scotia, New York 12302

   Phone: 518-374-5011

3. Contacting a computer search service (an agency that will conduct a search for you, usually for a fee)

   The EPA Information Dissemination Project maintains a list of agencies that can conduct searches. Most charge a fee, though some are free to qualified users in a limited geographical area.

   Phone or write to obtain information for your area.

VI. How to Locate Other Relevant Educational Materials

A number of people have requested information related to such areas as management, basic skills (reading, mathematics, writing) human relations, contract negotiations, and other topics. The EPA Information Dissemination Project plans to develop some user service products in selected areas in 1980.

Another excellent source of information for many educational concerns is the ERIC System.

ERIC is a national information system designed and developed by the U.S. Office of Education, and now supported and operated by the National Institute of Education (NIE), for providing ready access to descriptions of exemplary programs, research and development efforts, and related information that can be used in developing more effective educational programs.

There are 16 Clearinghouses in the nationwide ERIC network. Each specializes in a different, multi-discipline, educational area. Each searches out pertinent documents.

The ERIC Clearinghouses have responsibility within the network for acquiring the significant educational literature within their particular areas, selecting the highest quality and most relevant material, processing (i.e., cataloging, indexing, abstracting) the selected items for input to the data base, and also for providing information analysis products and various user services based on the data base.

The 16 ERIC Clearinghouses are listed on the next few pages, together with addresses, telephone numbers, and brief scope notes describing the areas they cover. You can contact them for assistance in locating information relevant to their scope notes.

A. ERIC Clearinghouse for Adult, Career, and Vocational Education
Ohio State University
Center for Vocational Education
1960 Kenny Road
Columbus, Ohio 43210
Telephone: (614) 486-3655

Career education, formal and informal at all levels, encompassing attitudes, self-knowledge, decision-making skills, general and occupational knowledge, and specific vocational and occupational skills; adult and continuing education, formal and informal, relating to occupational, family, leisure, citizen, organizational, and retirement roles; vocational and technical education, including new sub-professional fields, industrial arts, and vocational rehabiliation for the handicapped.

B. ERIC Clearinghouse on Counseling and Personnel Services
University of Michigan
School of Education Building, Room 2108
Ann Arbor, Michigan 48109
Telephone: (313) 764-9492

Preparation, practice, and supervision of counselors at all educational levels and in all settings,theoretical development of counseling and guidance, use and results of personnel procedures such as testing, interviewing, disseminating, and analyzing such information, group work and case work; nature of pupil, student, and adult characteristics; personnel workers and their relation to career planning, family consultations, and student orientation activities.

C. ERIC Clearinghouse on Elementary & Early Childhood Education
University of Illinois
College of Education
Urbana, Illinois 61801
Telephone: (217) 333-1386

Prenatal factors, parental behavior; the physical, psychological, social, educational, and cultural development of children from birth through the primary grades; educational theory, research, and practice related to the development of young children.

D. ERIC Clearinghouse on Educational Management
University of Oregon
Eugene, Oregon 97403
Telephone: (503) 686-5043

Leadership, management, and structure of public and private educational organizations; practice and theory of administration; preservice and inservice preparation of administrators, tasks and processes of administration, methods and varieties of organization, organizational change, and social context of the organization.

Sites, buildings, and equipment for education; planning, financing, constructing, renovating, equipping, maintaining, operating, insuring, utilizing, and evaluating educational facilities.

E. ERIC Clearinghouse on Handicapped and Gifted Children
Council for Exceptional Children
1920 Association Drive
Reston, Virginia 22091
Telephone: (703) 620-3660

Aurally handicapped, visually handicapped, mentally handicapped, physically handicapped, emotionally disturbed, speech handicapped, learning disabilities, and the gifted; behavioral, psychomotor, and communication disorders, administration of special education services; preparation and continuing education of professional and paraprofessional personnel; preschool learning and development of the exceptional; general studies on creativity.

F. ERIC Clearinghouse on Higher Education
George Washington University
One Dupont Circle, Suite 630
Washington, DC 20036
Telephone: (202) 296-2597

Various subjects relating to college and university students, college and university conditions and problems, college and university programs; curricular and instructional problems and programs, faculty, institutional research; federal programs, professional education (medical, law, etc.), graduate education, university extension programs, teaching-learning, planning, goverance, finance, evaluation, interinstitutional arrangements, and management of higher educational institutions.

G. ERIC Clearinghouse on Information Resources
Syracuse University
School of Education
Syracuse, New York 13210
Telephone: (315) 423-3640

Management, operation, and use of libraries; the technology to improve their operation and the education, training, and professional activities of librarians and information specialists. Educational techniques involved in microteaching, systems analysis, and programmed instruction employing audiovisual teaching aids and technology, such as television, radio, computers, and cable television, communication satellites, microforms, and public television.

H. ERIC Clearinghouse for Junior Colleges
University of California
Powell Library, Room 96
Los Angeles, California 90024
Telephone: (213) 825-3931

Development, administration, and evaluation of public and private community junior colleges. Junior college students, staff, curricula, programs, libraries, and community services.

I. ERIC Clearinghouse on Languages and Linguistics
Center for Applied Linguistics
1611 North Kent Street
Arlington, Virginia 22209
Telephone: (703) 528-4312

Languages and linguistics. Instructional methodology, psychology of language learning, cultural and intercultural content, application of linguistics, curricular problems and developments, teacher training and qualifications, language sciences, psycholinguistics, theoretical and applied linguistics, language pedagogy, bilingualism, and commonly taught languages including English for speakers of other languages.

J. ERIC Clearinghouse on Reading and Communication Skills
National Council of Teachers of English
1111 Kenyon Road
Urbana, Illinois 61801
Telephone: (217) 328-3870

Reading, English, and communication skills, preschool through college. Educational research and development in reading, writing, speaking, and listening. Identification, diagnosis, and remediation of reading problems. Speech communication--forensics, mass communication, interpersonal and small group interaction, interpretation, rhetorical and communication theory, instruction development, speech sciences, and theater. Preparation of instructional staff and related personnel in these areas.

All aspects of reading behavior with emphasis on physiology, psychology, sociology, and teaching. Instructional materials, curricula, tests and measurement, preparation of reading teachers and specialists, and methodology at all levels. Role of libraries and other agencies in fostering and guiding reading. Diagnostic and remedial services in school and clinical settings.

K. ERIC Clearinghouse on Rural Education and Small Schools
New Mexico State University
Box 3AP
Las Cruces, New Mexico 88003
Telephone: (505) 646-2623

Education of Indian Americans, Mexican Americans, Spanish Americans, and migratory farm workers and their children; outdoor education; economic, cultural, social, or other factors related to educational programs in rural areas and small schools; disadvantaged of rural and small school populations.

L. ERIC Clearinghouse for Science, Mathematics, and Environmental Education
Ohio State University
1200 Chambers Road, Third Floor
Columbus, Ohio 43212
Telephone: (614) 422-6717

All levels of science, mathematics, and environmental education; development of curriculum and instructional materials; media applications; impact of interest, intelligence, values, and concept development upon learning; preservice and inservice teacher education and supervision.

M. ERIC Clearinghouse for Social Studies/Social Science Education
855 Broadway
Boulder, Colorado 80302
Telephone: (303) 492-8434

All levels of social studies and social science; all activities relating to teachers; content of disciplines; applications of learning theory, curriculum theory, child development theory, and instructional theory; research and development programs; special needs of student groups; education as a social science; social studies/social science and the community.

N. ERIC Clearinghouse on Teacher Education
American Association of Colleges for Teacher Education
One Dupont Circle, NW, Suite 616
Washington, DC 20036
Telephone: (202) 293-7280

School personnel at all levels; all issues from selection through preservice and inservice preparation and training to retirement; curricula; educational theory and philosophy; general education not specifically covered by Educational Management Clearinghouse; Title XI NDEA Institutes not covered by subject speciality in other ERIC Clearinghouses; all aspects of physical education.

O. ERIC Clearinghouse on Tests, Measurement, and Evaluation
Educational Testing Service
Princeton, New Jersey 08540
Telephone: (609) 921-9000 ext. 2176

Tests and other measurement devices; evaluation procedures and techniques; application of tests, measurement, or evaluation in educational projects or programs.

P. ERIC Clearinghouse on Urban Education
Box 40
Teachers College, Columbia University
525 W. 120th Street
New York, New York 10027
Telephone: (212) 678-3437

The relationship between urban life and schooling; the effect of urban experiences and environments from birth onward; the academic, intellectual, and social performance of urban children and youth from grade three through college entrance (including the effect of self concept, motivation, and other affective influences); education of urban, Puerto Rican and Asian American populations, and rural and urban black populations; programs and practices which provide learning experiences designed to meet the special needs of diverse populations served by urban schools and which build upon their unique as well as their common characteristics; structural changes in the classroom, school, school system, and community and innovative instructional practices which directly affect urban children and youth; programs, practices, and materials related to economic and ethnic discrimination, segregation, desegregation, and integration in education; issues, programs, practices, and materials related to redressing the curriculum imbalance in the treatment of ethnic minority groups.

Q. Educational Resources Information Center
Central ERIC
National Institute of Education
Washington, DC 20208
Telephone: (202) 254-5555

There are other sources of educational information in many states. Included are information dissemination units in the state departments of education, intermediate education units, and local education units. In many cases, a local school administrator or school librarian can help you locate assistance.

VII. How to Structure a Computer Search of IRIS

This explanation relates to the IRIS data base that can be searched on-line through Bibliographic Retrieval Services, Inc. As IRIS becomes available through other sources, information relevant to those services will be provided.

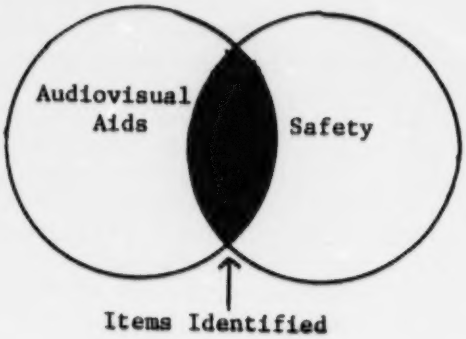
A few notes about the service are important. The following fields are searchable by computer: (1) IRIS Accession Number (EW number), (2) ERIC Accession Number (ED number), (3) Authors, (4) Institution (5) Title, (6) subject index terms, and (7) abstract.

If you submit a search of IRIS through BRS, the program will search for the words you select in three fields unless the searcher requests to limit the search. These fields are: (1) the title field, (2) the subject index field, and (3) the abstract. We recommend you use this feature especially for searches on specific terms. If you find more material than you want by this technique you can narrow the search to items that may have the most information on the topic by limiting the search to the subject index field.

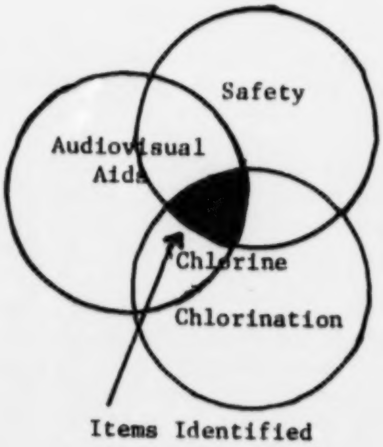
Several sample searches are listed.

A. Sample 1

If you want to locate audiovisual aids that relate to safety you would submit a search with audiovisual aids and safety. Materials that included the terms both audiovisual aids and safety in the title field, the abstract, and the subject index field would be identified by the computer.

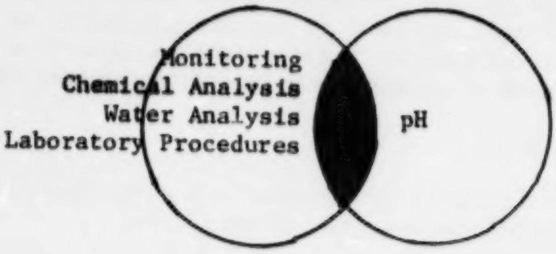

Audiovisual
Aids
Safety
Items Identified

The computer program can tell you the number of items, the title of the items, or print the entire resume of each item. If you were primarily interested in audiovisual aids, safety, and chlorine you would submit a search of these three terms. You might want to include chlorides and chlorination as well as chlorine in the search. This search would identify materials that contained audiovisual aids, safety, and one or more of the words, chlorine, and chlorination.


Safety
Audiovisual
Aids
Chlorine
Chlorination
Items Identified

B. Sample 2

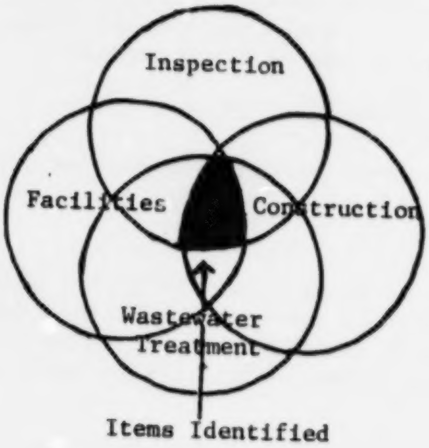
If you want to identify materials related to monitoring, you should include several related terms and the chemical, material, or situation that is being monitored. See the example below.


Monitoring
Chemical Analysis
Water Analysis
Laboratory Procedures
pH

This search would identify all the items that included any of the terms on the left and pH.

C. Sample 3

If you are interested in materials related to inspection and construction you could conduct a search of these two terms. The search would identify all materials that included both terms. If you were interested in only wastewater treatment facilities you could construct a search as diagrammed.


Inspection
Facilities
Construction
Wastewater
Treatment
Items Identified

This search would yield specific materials and demonstrates how a computer search can help you locate materials you want.

D. Use of the Subject Index

The subject index in the back of the compilation can be used to help you decide if you want to do a computer search. If there are relatively few entries, you can check the resumes in the resume section. If there is a large number of entries (perhaps 50 or more) you may want to use a computer search.

As the data base gets larger, you will find more entries for subject index terms and computer searching will offer more advantages.

The subject index can also be used to help you select words to include in a search. Words listed in the subject index are certain to be in the searchable fields. Therefore, selecting these terms to use in structuring a search will increase the probability of locating materials. Some words will appear in the title or abstract that are not included in the subject term field. Such words can be used to check if any materials are in the data base. If, however, you conduct a search with such a word it is usually best to include a synonym that is in the subject index.

VIII. How to Order Materials

The AVAILABILITY field in the resume indicates where materials can be obtained. A few of the sources are explained.

A. A number of audiovisual materials can be obtained on loan from the EPA National Training and Operational Technology Center, Cincinnati, Ohio 45268. They also offer a copy service to reproduce materials at a very reasonable price.

B. Some of the materials are available through the ERIC Document Reproduction Service. MF (microfiche) are 4" x 6" sheets of microfilm; up to 96 pages of text can be reproduced on one sheet. HC (paper copy) is a reproduction of the document in paper form at the original size.

Order forms for these materials can be obtained from:

ERIC Document Reproduction Service
P.O. Box 190
Arlington, Virginia 22210

C. The EPA Information Dissemination Project will provide xerox copies of materials that are not copyrighted for $1.00 per document plus $0.03 per page.

If you can not obtain materials that are listed or have difficulty obtaining materials, please contact the EPA Information Dissemination Project. We can provide assistance in obtaining materials from some sources. If materials become unavailable, we will remove them from the IRIS data base.

IX. USEPA
National Training and Operation Technology Center
Cincinnati, Ohio 45268

To fulfill national educational and training requirements, USEPA has organized the National Training and Operational Technology Center (NTOTC). NTOTC has the responsibility for planning, developing, conducting and evaluating USEPA's water pollution control training and education program. As an instructional resource, its purpose is to help regions, states, local governments and educational institutions to become knowledgeable about USEPA's goals, regulations, strategies, as well as the implications of USEPA programs which affect virtually everyone.

Activities encompass three categories: (1) instruction; (2) course development; and (3) information management.

Instruction--NTOTC offers a variety of training courses in water quality control. Such courses are taught at many locations, but most are presented at the Environmental Research Center in Cincinnati, Ohio. A current project will expand this effort to enable more environmental personnel to receive specialized instruction. Area training centers will soon act as satellites to the NTOTC program, offering similar courses and instructional support. Select universities with broad pollution control curricula will act as area training centers within a region. As a result, more pollution control personnel will have access to needed specialized training.

Since 1971, the NTOTC professional staff of chemists, biologists and engineers has presented nearly 350 courses to more than 8,000 students. Courses are offered throughout the year, and are designed to help participants understand current pollution control techniques and procedures. As USEPA regulations and policies are implemented, based in large part on USEPA research, courses are offered by NTOTC staff to upgrade knowledge and develop specific skills or procedures.

Some courses are conducted at wastewater treatment plants, enabling USEPA to work directly with plant personnel to improve treatment plant effluent. While working on site at treatment plants, staff can diagnose and discuss particular problems and can provide information on design and operation to many technicians within the local region.

Courses currently are offered in five general categories: wastewater treatment technology, treatment facility evaluation and inspection, water quality surveillance and monitoring, water quality analysis, and drinking water quality monitoring.

Students attend courses from all states, and from some foreign countries. The largest percentage represent federal, state, and municipal pollution control agencies. A relatively small number of college and university instructors attend these short courses which are typically one week in length. USEPA encourages more participation by the educational community, so that current skills and knowledge will be transmitted to students to enable them to deal with pollution control problems as they enter environmental occupations. Community college and university instructors may attend courses free of charge by following prescribed application procedures.

Course Development--NTOTC is active in the field of course development. As new educational and training needs are identified, appropriate instructional packages are developed. Almost all such development is based on current research and agency regulations. Materials include instructor guides, student manuals and supporting audiovisual materials. If USEPA's pollution control training programs are to be successfully implemented, college and university staff from various departments must cooperate and integrate these instructional activities within their curriculums; or students will not be adequately prepared, either theoretically or practically.

Information Management--The goal of USEPA's information management system is to support, in a comprehensive and systematic manner, those involved with pollution control education and training. A central location within the NTOTC facility is designed to provide a contact point and to coordinate assistance efforts and has been designated the Instructional Resources Center (IRC).

As the education and training community has become more aware of the types of programs operated by the IRC, requests for information have expanded dramatically. Many requests for assistance from instructors, information specialists, municipal water and wastewater treatment plant trainers, and representatives of government and business have been received.

Through the IRC, NTOTC maintains a central location to inventory, evaluate, catalog and disseminate instructional materials in the areas of water pollution control, water supply, and pesticides. Composed of several different but interrelated activities, it acts as a primary communications link between USEPA and educators at all post-secondary levels.

The IRC includes an audiovisual lending library housing slide/tape presentations, films and videotapes, all available for free, short-term loan. Most subject areas available are water quality-oriented.

Interested persons are invited to Cincinnati to use IRC facilities for reviewing tapes, slides, films, and other materials before deciding about purchases or curriculum development requirements. IRC staff assist visitors by determining the most appropriate ways to use the Center's resources, or in determining educational and training program requirements and available resources. During the past year, universities and state and local governments have been assisted with curriculum design, course materials selection, and audiovisual support efforts.

For more information on NTOTC write to the center at the following address:

National Training and Operational
 Technology Center (NTOTC)
26 West St. Clair
Cincinnati, Ohio 45268

Telephone: (513) 684-7501

RESUME SECTION

IRIS ACCESSION NUMBER: EW003235
PUBLICATION DATE: 78

TITLE: NEW AUDIO-VISUAL TRAINING PROGRAM FOR WASTEWATER TREATMENT PLANT OPERATORS.

DESCRIPTOR: *ACTIVATED SLUDGE; *ANAEROBIC DIGESTION; *CLARIFICATION; *DEWATERING; *DISINFECTION; *OPERATIONS (WASTEWATER); PRETREATMENT; *PUMPS; *SAFETY; *SLUDGE; SOLID WASTES; *TRAINING; *WASTEWATER TREATMENT; WATER POLLUTION CONTROL

ABSTRACT: THIS PROGRAM IS DESIGNED AS AN INTERMEDIATE COURSE FOR WASTEWATER TREATMENT PLANT OPERATORS. TOPICS COVERED INCLUDE: COMMUNITY WASTEWATER SYSTEMS, PRETREATMENT, CLARIFICATION, ACTIVATED SLUDGE, WASTE STABILIZATION PONDS, TRICKLING FILTERS, SLUDGE THICKENING, ANAEROBIC DIGESTION, AEROBIC DIGESTION, DEWATERING, WASTEWATER DISINFECTING, SAFETY, AND PUMPING. THE MATERIALS INCLUDE SLIDES, TAPE CASSETTES, STUDENT WORKBOOK, AND A PROGRAM ADMINISTRATOR HANDBOOK.

AVAILABILITY: WATER POLLUTION CONTROL FEDERATION, 2626 PENNSYLVANIA AVE, NW WASHINGTON, DC 20037 (AVAIL ON LOAN FROM NTOTC)

INSTITUTION NAME: WATER POLLUTION CONTROL FEDERATION.

IRIS ACCESSION NUMBER: EW003560

PUBLICATION DATE: APR 75

TITLE: AMERICAN NATIONAL STANDARD ON PHOTOGRAPHIC PROCESSING EFFLUENTS.

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *CHEMICALS; CHEMICAL ANALYSIS; CHEMISTRY; *EFFLUENTS; *INDUSTRIES; *LABORATORY TECHNIQUES; *PHOTOGRAPHY; *WASTE DISPOSAL; WATER POLLUTION CONTROL; *WATER QUALITY

DESCRIPTIVE NOTE: 42P.

ABSTRACT: THIS BOOKLET PROVIDES METHODS FOR THE ANALYSIS OF PHOTOGRAPHIC WASTES AND MAKES RECOMMENDATIONS FOR THE SAFE DISCHARGE OF PHOTOGRAPHIC PROCESSING EFFLUENTS, FOR THE REUSE OF CHEMICALS, AND FOR THE CONSERVATION OF WATER.

AVAILABILITY: AMERICAN NATIONAL STANDARDS INSTITUTE, INC., 1430 BROADWAY, NEW YORK, NJ 10018

INSTITUTION NAME: NATIONAL ASSOCIATION OF PHOTOGRAPHIC MANUFACTURERS, INC.

IRIS ACCESSION NUMBER: EW003694

PUBLICATION DATE: 78

TITLE: WATER ANALYSIS: SOME REVISED METHODS FOR LIMNOLOGISTS.

PERSONAL AUTHOR: MACKERETH, F. J. H.; AND OTHERS
DESCRIPTOR: *ANALYTICAL TECHNIQUES; ANIONS; CATIONS; DISSOLVED GASES; ELECTROLYTIC CONDUCTIVITY; *LAKES; *LABORATORY PROCEDURES; METALS; NITROGEN; ORGANIC COMPOUNDS; PHOSPHORUS; POLLUTION; *RIVERS; SILICON; WATER POLLUTION; *WATER ANALYSIS

DESCRIPTIVE NOTE: 120P. PRICE: $5.00.

ABSTRACT: IN THIS HANDBOOK ANALYTICAL METHODS ARE DESCRIBED DEALING WITH THE CONSTITUENTS MOST OFTEN REQUIRED IN A CHEMICAL ANALYSIS OF LAKE OR RIVER WATER. THE CONSTITUENTS INCLUDE DISSOLVED GAS, ELECTROLYTIC CONDUCTIVITY, ANIONS, CATIONS, NITROGEN, SILICON, PHOSPHORUS, AND DISSOLVED AND PARTICULATE ORGANIC MATTER.

AVAILABILITY: FRESHWATER BIOLOGICAL ASSOCIATION, THE FERRY HOUSE, FOR SAWREY, AMBLESIDE, CUMBRIA LA22 OLP, ENGLAND

IRIS ACCESSION NUMBER: EW003804

PUBLICATION DATE: 77

TITLE: ADVANTAGES OF SODIUM BICARBONATE IN WATER AND WASTEWATER TREATMENT.

DESCRIPTOR: *AEROBIC TREATMENT; *ANAEROBIC TREATMENT; CORROSION; *INDUSTRIAL WASTES; *MUNICIPAL WASTES; OPERATIONS (WASTEWATER); OPERATIONS (WATER); *SODIUM BICARBONATE; *WASTEWATER TREATMENT; *WATER TREATMENT

DESCRIPTIVE NOTE: 19P.

ABSTRACT: THIS BROCHURE EXAMINES THE USE OF SODIUM BICARBONATE IN WATER AND WASTEWATER TREATMENT. SECTIONS INCLUDE SODIUM BICARBONATE TREATMENTS FOR INDUSTRIAL WASTES, MUNICIPAL WASTEWATER, AND DRINKING WATER. EXAMPLES OF SUCCESSFUL APPLICATIONS IN AEROBIC AND ANAEROBIC PROCESSES ARE GIVEN.

AVAILABILITY: CHURCH 8 DWIGHT CO., INC., 20 KINGS BRIDGE ROAD, PICATAWAY, NJ 08854

INSTITUTION NAME: CHURCH 8 DWIGHT CO.

IRIS ACCESSION NUMBER: EW003809

PUBLICATION DATE: MAR 79

TITLE: DANGEROUS PROPERTIES OF INDUSTRIAL MATERIALS, FIFTH ED.

PERSONAL AUTHOR: SAX, N. IRVING

DESCRIPTOR: *AIR POLLUTION CONTROL; *CHEMISTRY; *CHEMICALS; *CARCINOGENS; *FIRE; *HANDBOOKS; *HAZARDOUS MATERIALS; LABORATORY MATERIALS; *RADIATION; REGULATION; *SAFETY; TOXIC SUBSTANCES; *WATER POLLUTION CONTROL

DESCRIPTIVE NOTE: 1136P. PRICE: $54.50
ABSTRACT: THE VOLUME INCLUDES GENERAL INFORMATION ABOUT INDUSTRIAL MATERIALS, SUCH AS SYNONYMS, DESCRIPTION, FORMULA AND PHYSICAL CONSTANTS. IN ADDITION, THERE IS A HAZARD ANALYSIS OF TOXICITY, FLAMMABILITY, EXPLOSIVENESS, AND DISASTER POTENTIAL. A COMPLETE EXPLANATION OF COUNTERMEASURES TO REVERSE OR MITIGATE POSSIBLE EFFECTS IS INCLUDED FOR EACH SUBSTANCE.

AVAILABILITY: VAN NOSTRAND REINHOLD, 135 WEST 50TH ST., NEW YORK, NY 10020

IRIS ACCESSION NUMBER: EW004043

PUBLICATION DATE: JUN 79

TITLE: RAW WATER PREPARATION.

DESCRIPTOR: COAGULATION; DESIGN; *DRINKING WATER; *EQUIPMENT; *OPERATIONS (WATER); PRETREATMENT; SCREENS; SEDIMENTATION; *WATER SUPPLY; *WATER TREATMENT; *WATER QUALITY; WATER RESOURCES

DESCRIPTIVE NOTE: C2-10P.

ABSTRACT: DESCRIBES TECHNIQUES USUALLY APPLIED TO THE PROCESSING OF SURFACE WATERS AND GROUNDWATER FOR PUBLIC WATER SYSTEMS. TECHNIQUES AND EQUIPMENT INVOLVING INTAKES AND SCREENS, COAGULATION, SEDIMENTATION, AND PACKAGE PLANTS ARE REVIEWED.

AVAILABILITY: 1979 PUBLIC WORKS MANUAL - PUBLIC WORKS JOURNAL CORPORATION, 200 SOUTH BROAD STREET, RIDGEWOOD, NJ 07451

IRIS ACCESSION NUMBER: EW004044

PUBLICATION DATE: JUN 79

TITLE: FILTRATION.

DESCRIPTOR: DESIGN; *DRINKING WATER; *EQUIPMENT; FACILITIES; *FILTRATION; *OPERATIONS (WATER); PRETREATMENT; SCREENS; *WATER TREATMENT; *WATER QUALITY; WATER RESOURCES

DESCRIPTIVE NOTE: C10-15P.

ABSTRACT: DESCRIBES SEVERAL TYPES OF MECHANISMS AND EQUIPMENT FOR WATER FILTRATION, INCLUDING MICROSTRAINERS AND MICROSCREENS, CONVENTIONAL FILTRATION, AUTOMATIC OPERATION, COMPLETE PLANT INSTALLATION, AND DIATOMITE FILTERS.

AVAILABILITY: 1979 PUBLIC WORKS MANUAL - PUBLIC WORKS JOURNAL CORPORATION, 200 SOUTH BROAD STREET, RIDGEWOOD, NJ 07451

IRIS ACCESSION NUMBER: EW004045
PUBLICATION DATE: JUN 79

TITLE: SOFTENING, IRON AND MANGANESE REMOVAL.

DESCRIPTOR: DESALINATION; *DRINKING WATER; *EQUIPMENT; FLUORIDES; IRON; MANGANESE; *MINERALS; *OPERATIONS (WATER); SOFTENING; *WATER SUPPLY; *WATER TREATMENT; *WATER QUALITY; WATER RESOURCES

DESCRIPTIVE NOTE: C15-20P.

ABSTRACT: DESCRIBES METHODS FOR FREEING WATER FROM MINERAL IMPURITIES IN EXCESSIVE CONCENTRATIONS. REVIEWS REGULATIONS THAT LIMIT THE CONTAMINANT LEVELS OF SEVERAL MINERALS, METALS, CHLORINATED HYDROCARBONS, ETC. SUMMARIZES METHODS AND EQUIPMENT FOR THE SOFTENING, DESALTING, REMOVAL OF IRON AND MANGANESE, AND FLUORIDE ADJUSTMENT OF WATER.

AVAILABILITY: 1979 PUBLIC WORKS MANUAL - PUBLIC WORKS JOURNAL CORPORATION, 200 SOUTH BROAD STREET, RIDGEWOOD, NJ 07451

IRIS ACCESSION NUMBER: EW004046

PUBLICATION DATE: JUN 79

TITLE: DISINFECTION, TASTE AND ODOR CONTROL.

DESCRIPTOR: *DISINFECTION; *DRINKING WATER; *EQUIPMENT; *ODOR; *OPERATIONS (WATER); *TASTE; *WATER TREATMENT; *WATER SUPPLY; *WATER QUALITY; WATER RESOURCES

DESCRIPTIVE NOTE: C20-26P.

ABSTRACT: REVIEWS VARIOUS ASPECTS OF DISINFECTION OF WATER, INCLUDING THE CHEMICALS USED AND VARIOUS SYSTEMS AVAILABLE FOR CHLORINATION AND/OR AMMONIATION. ALSO DESCRIBES METHODS AND EQUIPMENT FOR TASTE AND ODOR CONTROL, AND AERATION AND DEAERATION TECHNIQUES.

AVAILABILITY: 1979 PUBLIC WORKS MANUAL - PUBLIC WORKS JOURNAL CORPORATION, 200 SOUTH BROAD STREET, RIDGEWOOD, NJ 07451

IRIS ACCESSION NUMBER: EW004047

PUBLICATION DATE: JUN 79

TITLE: MAINS AND SERVICES.

DESCRIPTOR: ASBESTOS CEMENT PIPES; CAST-IRON PIPES; CONCRETE PIPES; *DRINKING WATER; *EQUIPMENT; *PIPES; PLASTIC PIPES; STEEL PIPES; *WATER SUPPLY; *WATER DISTRIBUTION; WATER RESOURCES

DESCRIPTIVE NOTE: C26-35P.

ABSTRACT: DESCRIBES EQUIPMENT OF VARIOUS MATERIALS USED IN

DISTRIBUTING WATER TO THE SUPPLIER AND THEN TO THE USER, INCLUDING PIPE, JOINTS, FITTINGS, AND COATINGS FOR CAST-IRON MAINS, AND PIPE OF PLASTIC, STEEL, ASBESTOS-CEMENT, AND CONCRETE. ALSO DESCRIBES SERVICES MADE OF WROUGHT IRON, STEEL, LEAD, COPPER, AND OTHER MATERIALS.

AVAILABILITY: 1979 PUBLIC WORKS MANUAL - PUBLIC WORKS JOURNAL CORPORATION, 200 SOUTH BROAD STREET, RIDGEWOOD, NJ 07451

IRIS ACCESSION NUMBER: EW004048

PUBLICATION DATE: JUN 79

TITLE: PUMPS AND MOTORS.

DESCRIPTOR: *DRINKING WATER; *EQUIPMENT; *MOTORS; *PUMPS; *WATER SUPPLY; *WATER DISTRIBUTION; WATER RESOURCES

DESCRIPTIVE NOTE: C35-41P.

ABSTRACT: REVIEWS USES OF PUMPS AND MOTORS IN TRANSPORTING WATER. DISCUSSES CENTRIFUGAL PUMPS, DISPLACEMENT PUMPS, DEEP WELL PUMPS, PNEUMATIC SYSTEMS, MOTIVE POWER, ENGINES, AND AUTOMATIC OPERATION.

AVAILABILITY: 1979 PUBLIC WORKS MANUAL - PUBLIC WORKS JOURNAL CORPORATION, 200 SOUTH BROAD STREET, RIDGEWOOD, NJ 07451

IRIS ACCESSION NUMBER: EW004049

PUBLICATION DATE: JUN 79

TITLE: VALVES AND HYDRANTS.

DESCRIPTOR: DESIGN; *DRINKING WATER; *EQUIPMENT; *HYDRANTS; *WATER SUPPLY; *VALVES; *WATER DISTRIBUTION; WATER RESOURCES

DESCRIPTIVE NOTE: C41-46P.

ABSTRACT: REVIEWS TYPES AND FUNCTIONS OF VALVES AND FIRE HYDRANTS.

AVAILABILITY: 1979 PUBLIC WORKS MANUAL - PUBLIC WORKS JOURNAL CORPORATION, 200 SOUTH BROAD STREET, RIDGEWOOD, NJ 07451

IRIS ACCESSION NUMBER: EW004050

PUBLICATION DATE: JUN 79

TITLE: WATER STORAGE.

DESCRIPTOR: DESIGN; *DRINKING WATER; EQUIPMENT; *GROUNDWATER; *RESERVOIRS; *WATER SUPPLY; *WATER TANKS; *WATER STORAGE; *WATER RESOURCES; *WELLS

DESCRIPTIVE NOTE: C46-54P.

ABSTRACT: REVIEWS CONSTRUCTION FEATURES OF RESERVOIRS, BOTH ELEVATED AND GROUND SURFACE, AND DEVELOPMENT OF GROUNDWATER SOURCES THROUGH WELL CONSTRUCTION.

AVAILABILITY: 1979 PUBLIC WORKS MANUAL - PUBLIC WORKS JOURNAL CORPORATION, 200 SOUTH BROAD STREET, RIDGEWOOD, NJ 07451

IRIS ACCESSION NUMBER: EW004051

PUBLICATION DATE: JUN 79

TITLE: METERING, MONITORING AND QUALITY CONTROL.

DESCRIPTOR: *ANALYTICAL TECHNIQUES; CHEMICAL ANALYSIS; *DRINKING WATER; *EQUIPMENT; MEASUREMENT; *MONITORING; *OPERATIONS (WATER); *PROCESS CONTROL; *SAMPLING; *WATER SUPPLY; *WATER QUALITY; WATER METERS; WATER RESOURCES

DESCRIPTIVE NOTE: C54-66P.

ABSTRACT: DESCRIBES DIFFERENT KINDS OF METERS USED IN CUSTOMER METERING AND MAINLINE METERING. REVIEWS TYPES OF SYSTEMS USED IN TELEMETERING AND ITS SUPERVISORY CONTROL. DISCUSSES LABORATORY EQUIPMENT FOR CHEMICAL ANALYSIS AND MICROBIOLOGICAL ANALYSIS, FIELD SERVICE LABORATORIES, AND PROCESS CONTROL INSTRUMENTATION.

AVAILABILITY: 1979 PUBLIC WORKS MANUAL - PUBLIC WORKS JOURNAL CORPORATION, 200 SOUTH BROAD STREET, RIDGEWOOD, NJ 07451

IRIS ACCESSION NUMBER: EW004052

PUBLICATION DATE: JUN 79

TITLE: COLLECTION SYSTEMS.

DESCRIPTOR: *COLLECTION SYSTEMS; *EQUIPMENT; FACILITIES; *PIPES; *SEWERS; WATER POLLUTION CONTROL; *WASTEWATER TREATMENT; *WASTEWATER COLLECTION

DESCRIPTIVE NOTE: D2-10P.

ABSTRACT: DESCRIBES EQUIPMENT USED IN CONSTRUCTING A NETWORK OF COLLECTING SEWERS AND INTERCEPTORS IN A SEWERAGE SYSTEM. SPECIFICATIONS, MANUFACTURERS, PIPE FITTINGS AND SPECIALS, AND OTHER ITEMS ARE REVIEWED FOR VARIOUS KINDS OF PIPE. SEWER APPURTENANCES SUCH AS MANHOLES, PIPE TOOLS, AND REGULATORS ARE DISCUSSED.

AVAILABILITY: 1979 PUBLIC WORKS MANUAL - PUBLIC WORKS JOURNAL CORPORATION, 200 SOUTH BROAD STREET, RIDGEWOOD, NJ 07451

IRIS ACCESSION NUMBER: EW004053

PUBLICATION DATE: JUN 79

TITLE: SECONDARY TREATMENT.

DESCRIPTOR: *ACTIVATED SLUDGE; *BIOLOGICAL TREATMENT; EQUIPMENT; *OPERATIONS (WASTEWATER); *OXIDATION PONDS; *SECONDARY TREATMENT; WATER POLLUTION CONTROL; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: D26-34P.

ABSTRACT: REVIEWS METHODS USED FOR BIOLOGICAL STABILIZATION OF THE LIQUID PHASE OF WASTEWATER TREATMENT INVOLVING THE ACTIVATED SLUDGE PROCESS, STABILIZATION PONDS, AND BIOLOGICAL FILTERS.

AVAILABILITY: 1979 PUBLIC WORKS MANUAL - PUBLIC WORKS JOURNAL CORPORATION, 200 SOUTH BROAD STREET, RIDGEWOOD, NJ 07451

IRIS ACCESSION NUMBER: EW004054

PUBLICATION DATE: JUN 79

TITLE: ADVANCED TREATMENT.

DESCRIPTOR: *DESIGN; *EQUIPMENT; LAND TREATMENT; NUTRIENT REMOVAL; *OPERATIONS (WASTEWATER); SOLID WASTES; *TERTIARY TREATMENT; WATER POLLUTION CONTROL; *WASTEWATER TREATMENT
DESCRIPTIVE NOTE: D35-41P.

ABSTRACT: DISCUSSES ADVANCED WASTEWATER TREATMENT PROCESSES, INCLUDING SOLIDS REMOVAL BY FILTRATION, NUTRIENT REMOVAL, USE OF CHEMICALS, COMBINED PHYSICAL-CHEMICAL TREATMENT, COMPLETE PLANTS, AND LAND TREATMENT SYSTEMS.

AVAILABILITY: 1979 PUBLIC WORKS MANUAL - PUBLIC WORKS JOURNAL CORPORATION, 200 SOUTH BROAD STREET, RIDGEWOOD, NJ 07451

IRIS ACCESSION NUMBER: EW004055

PUBLICATION DATE: JUN 79

TITLE: SLUDGE DIGESTION AND DISPOSAL.

DESCRIPTOR: ANAEROBIC DIGESTION; AEROBIC DIGESTION; *DESIGN; *EQUIPMENT; *OPERATIONS (WASTEWATER); SOLID WASTES; SLUDGE DIGESTION; SLUDGE DEWATERING; *SLUDGE STABILIZATION; WATER POLLUTION CONTROL; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: D41-52P.

ABSTRACT: DISCUSSES VARIOUS METHODS FOR STABILIZING THE ORGANIC MATTER PRESENT IN WASTEWATER, ONCE IT HAS BEEN SEPARATED FROM THE LIQUID FRACTION. ANAEROBIC AND AEROBIC DIGESTION, GAS UTILIZATION, CHEMICAL STABILIZATION, DEWATERING SLUDGE, USING SLUDGE AS FERTILIZER, FILTER CAKE DRYING, AND SLUDGE DISPOSAL ARE DISCUSSED.

AVAILABILITY: 1979 PUBLIC WORKS MANUAL - PUBLIC WORKS JOURNAL CORPORATION, 200 SOUTH BROAD STREET, RIDGEWOOD, NJ 07451

IRIS ACCESSION NUMBER: EW004056

PUBLICATION DATE: JUN 79

TITLE: DISINFECTION AND ODOR CONTROL.

DESCRIPTOR: *DISINFECTION; EQUIPMENT; *EFFLUENTS; *ODOR CONTROL; *OPERATIONS (WASTEWATER); WATER POLLUTION CONTROL; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: D52-55P.

ABSTRACT: DISCUSSES METHODS FOR DISINFECTION OF THE WASTEWATER EFFLUENT, INCLUDING APPLICATION OF CHLORINE, OZONE, ULTRAVIOLET RADIATION, AND BROMINE CHLORIDE. ODOR CONTROL IS ALSO DISCUSSED.

AVAILABILITY: 1979 PUBLIC WORKS MANUAL - PUBLIC WORKS JOURNAL CORPORATION, 200 SOUTH BROAD STREET, RIDGEWOOD, NJ 07451

IRIS ACCESSION NUMBER: EW004057
PUBLICATION DATE: JUN 79

TITLE: OPERATION CONTROL.

DESCRIPTOR: *EQUIPMENT; *LABORATORY PROCEDURES; *MEASUREMENT INSTRUMENTS; *OPERATIONS (WASTEWATER); SAMPLING; WATER QUALITY; WATER POLLUTION CONTROL; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: D55-61P.

ABSTRACT: DISCUSSES VARIOUS ASPECTS OF PROPERLY OPERATING WASTEWATER TREATMENT FACILITIES. DESCRIBES EQUIPMENT USED IN MEASURING WATER FLOW IN OPEN CHANNELS AND IN PIPES; GAS, TEMPERATURE, RAIN, AND SLUDGE; IN TAKING SAMPLES; AND IN TESTING WATER QUALITY. LABORATORY EQUIPMENT, SAFETY INSTRUMENTATION, AND SUPERVISORY CONTROL ARE ALSO DESCRIBED.

AVAILABILITY: 1979 PUBLIC WORKS MANUAL - PUBLIC WORKS JOURNAL CORPORATION, 200 SOUTH BROAD STREET, RIDGEWOOD, NJ 07451

IRIS ACCESSION NUMBER: EW004058

PUBLICATION DATE: JUN 79

TITLE: SEWER MAINTENANCE AND REHABILITATION.

DESCRIPTOR: *EQUIPMENT; *INSPECTION; *MAINTENANCE; *OPERATIONS (WASTEWATER); *SEWERS; *WATER POLLUTION CONTROL; WASTEWATER TREATMENT; *WASTEWATER COLLECTION

DESCRIPTIVE NOTE: D61-66P.

ABSTRACT: DISCUSSES ASPECTS OF SEWER MAINTENANCE AND REHABILITATION, INCLUDING EVALUATION PROCEDURES, REMOVAL OF OBSTRUCTIONS, TELEVISION INSPECTION, PREVENTIVE MAINTENANCE, MAINTENANCE CREWS, SAFETY APPLIANCES, AND EQUIPMENT FOR EMPTYING CATCH BASINS.

AVAILABILITY: 1979 PUBLIC WORKS MANUAL - PUBLIC WORKS JOURNAL CORPORATION, 200 SOUTH BROAD STREET, RIDGEWOOD, NJ 07451

IRIS ACCESSION NUMBER: EW004059

PUBLICATION DATE: JUN 79

TITLE: HEALTH CONCERNS.

DESCRIPTOR: *PEST MANAGEMENT; PEST CONTROL; *PUBLIC FACILITIES; *PUBLIC HEALTH; *RECREATION; *SANITARY FACILITIES; SITE SELECTION; *WASTE DISPOSAL; *WATER SUPPLY; WATER RESOURCES

DESCRIPTIVE NOTE: F6-10P.

ABSTRACT: DISCUSSES SEVERAL BASIC HEALTH CONSIDERATIONS SHARED BY MOST OUTDOOR RECREATIONAL FACILITIES: PROPER SITE SELECTION, WATERSHED MANAGEMENT, WATER SUPPLY, SEWAGE DISPOSAL, PROPER PLUMBING, BUILDING HYGIENE, SOLID WASTE DISPOSAL, INSECT AND RODENT CONTROL AND SUITABLE ACCESS.

AVAILABILITY: 1979 PUBLIC WORKS MANUAL - PUBLIC WORKS JOURNAL CORPORATION, 200 SOUTH BROAD STREET, RIDGEWOOD, NJ 07451

IRIS ACCESSION NUMBER: EW004060

PUBLICATION DATE: JUN 79

TITLE: SWIMMING POOLS AND BEACHES.

DESCRIPTOR: *BEACHES; PUBLIC FACILITIES; *PUBLIC HEALTH; *RECREATION; *SANITARY FACILITIES; *SWIMMING POOLS; *WATER QUALITY; WATER RESOURCES

DESCRIPTIVE NOTE: F25-27P.

ABSTRACT: DISCUSSES ASPECTS OF NATURAL BEACH AND SWIMMING POOL DESIGN AND OPERATION, INCLUDING BIOLOGICAL, CHEMICAL AND PHYSICAL GUIDELINES FOR BATHING WATER QUALITY. MANUFACTURERS OF CHEMICALS AND EQUIPMENT TO CONTROL SWIMMING POOL WATER QUALITY ARE LISTED.

AVAILABILITY: 1979 PUBLIC WORKS MANUAL - PUBLIC WORKS JOURNAL CORPORATION, 200 SOUTH BROAD STREET, RIDGEWOOD, NJ 07451

IRIS ACCESSION NUMBER: EW004360

PUBLICATION DATE: 79

TITLE: TRAINING MANUAL FOR WATER PLANT OPERATION.

DESCRIPTOR: *CHLORINATION; ENGINEERING; *EQUIPMENT; *FACILITIES; HYDROLOGY; *INSTRUCTIONAL MATERIALS; *KENTUCKY; LABORATORY EQUIPMENT; *LABORATORY TESTS; *OPERATIONS (WATER); *POST SECONDARY EDUCATION; *RECORD KEEPING; TOXIC SUBSTANCES; *WATER DISTRIBUTION; WATER QUALITY; *WATER SUPPLY; *WATER TREATMENT; WATER POLLUTION CONTROL

DESCRIPTIVE NOTE: 197P. PRICE: $15.00

ABSTRACT: THIS TRAINING MANUAL HAS BEEN PREPARED BY THE ENGINEERING STAFF OF THE COMMONWEALTH OF KENTUCKY TO ASSIST WATER PLANT OPERATORS IN UNDERSTANDING THE BASIC PRINCIPLES INVOLVED IN WATER TREATMENT AND PLANT OPERATION. CHAPTERS INCLUDE: WATER TREATMENT; DISTRIBUTION SYSTEM; CHEMISTRY OF WATER TREATMENT; WATER PROBLEMS AND THEIR TREATMENT; BASIC WATER PLANT CALCULATIONS; MONTHLY OPERATIONAL REPORT; CALIBRATION OF CHEMICAL FEEDERS; PROCEDURES FOR LABORATORY TESTS; CHEMICAL, PHYSICAL, AND RADIOLOGICAL LIMITS; AND LABORATORY EQUIPMENT.

AVAILABILITY: KENTUCKY DEPT FOR NATURAL RESOURCES & EE, CENTURY PLAZA HWY, 127 SOUTH, FRANKFORT, KY 40601

INSTITUTION NAME: COMMONWEALTH OF KENTUCKY.

IRIS ACCESSION NUMBER: EW004362

PUBLICATION DATE: DEC 74

TITLE: OHIO MANUAL OF TRAFFIC CONTROL FOR CONSTRUCTION AND MAINTENANCE OPERATIONS.

DESCRIPTOR: *ACCIDENT PREVENTION; CONSTRUCTION; *DESIGN; GUIDELINES; MAINTENANCE; *OHIO; ROADWAY CONSTRUCTION; *SAFETY; *TRAFFIC SIGNS; *TRAFFIC CONTROL; TRANSPORTATION

DESCRIPTIVE NOTE: 68P. PRICE: $4.00

ABSTRACT: THIS HANDBOOK SETS FORTH BASIC PRINCIPLES AND PRESCRIBES DESIGN STANDARDS FOR TRAFFIC CONTROL FOR CONSTRUCTION AND MAINTENANCE OPERATIONS. INCLUDED ARE TYPICAL APPLICATIONS FOR THE CONSTRUCTION, ERECTION, INSTALLATION, AND MAINTENANCE OF VARIOUS TYPES OF TRAFFIC CONTROL DEVICES REQUIRED FOR ROAD OR STREET CONSTRUCTION, MAINTENANCE OPERATIONS AND PUBLIC UTILITY WORK. THESE INCLUDE SIGNS, SIGNALS, LIGHTING DEVICES, MARKING BARRICADES, CHANNELIZING AND HAND SIGNALING DEVICES. SIGN SPECIFICATIONS AND PLACEMENT ARE ALSO ILLUSTRATED.

AVAILABILITY: OPERATOR TRAINING COMMITTEE OF OHIO, INC., P.O. BOX 626, WORTHINGTON, OHIO 43085

INSTITUTION NAME: OHIO DEPARTMENT OF TRANSPORTATION.

IRIS ACCESSION NUMBER: EW004364

PUBLICATION DATE: JUL 79

TITLE: ACCEPTED PROCEDURE AND PRACTICE IN CROSS CONNECTION CONTROL MANUAL- SECOND EDITION.

DESCRIPTOR: *BACKFLOW; *CROSS CONNECTIONS; EQUIPMENT; EQUIPMENT INSTALLATION; EQUIPMENT TESTING; IRRIGATION; PACIFIC NORTHWEST; *PLUMBING; POTABLE WATER; PUBLIC HEALTH; *WATER DISTRIBUTION; WATER POLLUTION; *WATER QUALITY; *WATER SUPPLY

DESCRIPTIVE NOTE: 86P. PRICE: $2.00

ABSTRACT: THIS MANUAL IS INTENDED TO AUGMENT THE APPLICABLE STATE AND LOCAL PLUMPING CODES AND HAS BEEN PREPARED AS A RECOMMENDED MINIMUM STANDARD TO CROSS CONNECTION CONTROL. ITS MAIN THRUST IS TO OUTLINE RECOMMENDED PROCEDURES OF A CROSS CONNECTION PROGRAM TO PROTECT THE WATER SUPPLY FROM A POTENTIAL HEALTH OR SYSTEM HAZARD COMMONLY FOUND IN MOST POTABLE WATER SUPPLY SYSTEMS. CHAPTERS INCLUDE: TYPES OF CROSS CONNECTION CONTROL DEVICES; RECOMMENDED BACKFLOW PREVENTION PROCEDURE; RECOMMENDED INSTALLATION PRACTICE; OBSOLETE DEVICES AND SPECIAL ASSEMBLIES; REQUIREMENTS FOR EQUIPMENT APPROVAL AND TESTING; AND TEST PROCEDURES FOR BACKFLOW DEVICES.

AVAILABILITY: WASHINGTON STATE DEPT OF SOCIAL 8 HEALTH SERVICES, P. O. BOX 1788, OLYMPIA, WA 98504

INSTITUTION NAME: PACIFIC NORTHWEST SECTION, AMERICAN WATER WORKS ASSOCIATION.

IRIS ACCESSION NUMBER: EW004370

PUBLICATION DATE: 77

TITLE: WASTEWATER TREATMENT PLANT DESIGN.

DESCRIPTOR: CONSTRUCTION; *DESIGN; ENGINEERING; ENVIRONMENTAL LAW; *EQUIPMENT; *FACILITIES; *INSTRUCTIONAL MATERIALS; *OPERATIONS (WASTEWATER); POLLUTION CONTROL; TECHNOLOGY; *TEXTBOOKS; *WASTEWATER TREATMENT; *WATER TECHNOLOGY

DESCRIPTIVE NOTE: 560P. PRICE: $16.00

ABSTRACT: THIS DETAILED TEXTBOOK EXAMINES WASTEWATER TREATMENT TECHNOLOGY AND THE EVOLUTION OF ENVIRONMENTAL LAW AND ITS IMPACT ON TECHNOLOGY. CHAPTERS INCLUDE: GENERAL PROCESS DESIGN CONSIDERATIONS, GENERAL PHYSICAL DESIGN CONSIDERATIONS, OCCUPATIONAL HEALTH AND PHYSICAL SAFETY, CONSTRUCTION MATERIALS, PUMPS AND PUMPING APPURTENANCES, PRE-AERATION AND POST-AERATION, PRE-CHLORINATION AND INTERMEDIATE CHLORINATION, COARSE AND FINE SCREENING, GRIT REMOVAL, FLOTATION, CHEMICAL TREATMENT, FLOCCULATION, RECARBONATION, ACTIVATED SLUDGE, BIOLOGICAL FILTERS, SEDIMENTATION, GRANULAR MEDIA FILTRATION, ACTIVATED CARBON ABSORPTION, AMMONIA REMOVAL, DISINFECTION, DECHLORINATION, STABILIZATION LAGOONS, LAND APPLICATION OF WASTEWATER, SLUDGE PUMPING, SLUDGE PREPARATION, DRYING AND REDUCTION, AEROBIC SLUDGE REDUCTION, AND ANAEROBIC SLUDGE DIGESTION. IN EACH CHAPTER, AN EFFORT WAS MADE TO PRESENT APPLICABLE PROCESS THEORY AND THEN, USING THIS THEORY, TO ADDRESS DESIGN CONSIDERATIONS AND APPLICATIONS.

AVAILABILITY: AMERICAN SOCIETY OF CIVIL ENGINEERS, 345 EAST 47TH ST., NEW YORK, NY 10017

INSTITUTION NAME: AMERICAN SOCIETY OF CIVIL ENGINEERS.

IRIS ACCESSION NUMBER: EW004374

PUBLICATION DATE: 79

TITLE: CHEMICAL PRINCIPLES IN THE LABORATORY.

PERSONAL AUTHOR: SLOWINSKI, EMIL J.; AND OTHERS

DESCRIPTOR: *ANALYTICAL CHEMISTRY; CHEMICAL ANALYSIS; CHEMICAL REACTIONS; *CHEMISTRY; GUIDES; HANDBOOK; *INSTRUCTIONAL MATERIALS; *LABORATORY TECHNIQUES; *MANUALS; *ORGANIC CHEMISTRY; POST SECONDARY EDUCATION; SCIENCE EDUCATION; *TEACHING GUIDES; TEXTBOOKS

DESCRIPTIVE NOTE: 319P. PRICE: $9.95

ABSTRACT: THIS LABORATORY MANUAL ILLUSTRATES MANY OF THE ESTABLISHED PRINCIPLES OF CHEMISTRY WITH DETAILED EXPERIMENTS AND METHODS FOR CALCULATION OF DATA. SECTIONS INCLUDE: PROPERTIES OF MATTER, CHEMICAL SEPARATIONS, FORMULAS AND STOICHIOMETRY, CALORIMETRY, PROPERTIES OF GASES, ATOMIC STRUCTURE, CHEMICAL BONDING, ORGANIC CHEMISTRY, PROPERTIES OF LIQUIDS AND SOLUTIONS, CHEMICAL EQUILIBRIUM, CHEMICAL KINETICS, PRECIPITATION REACTIONS, ACIDS AND BASES, COMPLEX IONS, ELECTROCHEMISTRY, AND QUALITATIVE ANALYSIS. ALL DATA IN EACH OF THE 40 EXPERIMENTS HAVE BEEN CONVERTED TO SI UNITS. THE MANUAL IS COMPATIBLE WITH THE SI VERSION OF THE TEXT ''CHEMICAL PRINCIPLES'' BY THE SAME AUTHORS.

AVAILABILITY: W. B. SAUNDERS, COMPANY, WEST WASHINGTON SQUARE, PHILADELPHIA, PA 19105

IRIS ACCESSION NUMBER: EW004403

PUBLICATION DATE: 72

TITLE: PROBABILITY AND STATISTICS IN HYDROLOGY.

PERSONAL AUTHOR: YEVJEVICH, VUJICA

DESCRIPTOR: *HYDROLOGY; *INSTRUCTIONAL MATERIALS; MULTIVARIATE ANALYSIS; *PROBABILITY; RANDOM VARIABLES; REGRESSION; *STATISTICS; SAMPLING; *TEXTBOOKS

DESCRIPTIVE NOTE: 302P. PRICE: $19.00

ABSTRACT: PROBABILITY THEORY IS PRESENTED IN A SUMMARIZED FORM WITH A STRESS ON ITS USE IN HYDROLOGY. STATISTICALLY, THE EMPHASIS IS ON INFERENTIAL RATHER THAN DESCRIPTIVE

STATISTICS OF CLASSICAL HYDROLOGICAL APPLICATIONS. THE BOOK DEFINES CERTAIN CONCEPTS, EXPLAINS TECHNIQUES, LISTS APPROPRIATE MATHEMATICAL EXPRESSIONS AND STRESSES THE APPLICATION OF PROBABILITY AND STATISTICS TO HYDROLOGY BY NUMEROUS EXAMPLES. THE BOOK IS AIMED AT: PRACTICING HYDROLOGISTS AND ENGINEERS, GRADUATE STUDENTS AND PARTICIPANTS OF VARIOUS POSTGRADUATE TRAINING COURSES, AND SPECIALISTS, OTHER THAN HYDROLOGISTS, INTERESTED IN PROBABILITY THEORY AND MATHEMATICAL STATISTICS AS APPLIED TO HYDROLOGY.

AVAILABILITY: WATER RESOURCES PUBLICATIONS, P.O. BOX 2841, LITTLETON, CO 80151

IRIS ACCESSION NUMBER: EW004405

PUBLICATION DATE: 78

TITLE: CARBON ABSORPTION HANDBOOK.

PERSONAL AUTHOR: CHEREMISINOFF, PAUL N.; ELLERBUSCH, FRED

DESCRIPTOR: ANALYTICAL TECHNIQUES; AIR POLLUTION CONTROL; CHEMISTRY; *CARBON ABSORPTION; *ENGINEERING; INDUSTRIES; MANUFACTURING; *RESEARCH; *TECHNOLOGY; WATER POLLUTION CONTROL; *WATER TREATMENT

DESCRIPTIVE NOTE: 1054P. PRICE: $36.00

ABSTRACT: THIS DEFINITIVE STUDY FOCUSES ON THE PRACTICAL ASPECTS OF CARBON ADSORPTION USE IN AIR AND WATER POLLUTION CONTROL AS WELL AS MANUFACTURING USES. CASE HISTORIES ARE USED TO ILLUSTRATE THE MANY APPLICATIONS OF ADSORPTION--ESPECIALLY IN THE PHARMACEUTICAL, MEAT PACKING, PULP AND PAPER PROCESSING AND PETROLEUM INDUSTRIES, MUNICIPAL AND INDUSTRIAL WATER TREATMENT. THIS BOOK DEALS WITH THE DIFFICULT PRACTICAL PROBLEM OF USED CARBON REGENERATION. SPECIFIC METHODS, ANALYTICAL TECHNIQUES, SUBSTANCES AND INDUSTRIES ARE EXAMINED, AND AN OVERVIEW OF THE THEORETICAL BASIS FOR CARBON ADSORPTION IS ALSO PROVIDED.

AVAILABILITY: ANN ARBOR SCIENCE PUBLISHERS, INC., P.O. BOX 1425, ANN ARBOR, MI 48106

IRIS ACCESSION NUMBER: EW004414

PUBLICATION DATE: 77

TITLE: MECHANICS OF HETEROGENEOUS FLUIDS IN POROUS MEDIA.

PERSONAL AUTHOR: COREY, ARTHUR T.

DESCRIPTOR: EARTH SCIENCE; *FLUID MECHANICS; *FLUID SYSTEMS; GROUNDWATER; *HYDROLOGY; *INSTRUCTIONAL MATERIALS; PETROLEUM INDUSTRY; *POROUS MEDIA; *POST SECONDARY EDUCATION; SOIL PHYSICS; *SOIL SCIENCE; *TEXTBOOKS

DESCRIPTIVE NOTE: 259P. APPROX. PRICE: $20.00

ABSTRACT: THIS TEXT IS CONCERNED PRIMARILY WITH THE MECHANICS OF TWO-PHASE FLUID SYSTEMS IN SOILS AND POROUS ROCK. APPLICATIONS RELATING TO INFILTRATION, SUBSURFACE DRAINAGE AND PRODUCTION OF OIL AND GAS FROM PETROLEUM RESEVOIRS ARE INCLUDED. CHAPTERS INCLUDED IN THIS TEXT ARE: PROPERTIES OF POROUS MEDIA AND FLUID MIXTURES, HETEROGENEOUS FLUIDS IN STATIC SYSTEMS, EQUATIONS OF FLUID FLUX IN POROUS MEDIA, STEADY FLOW HETEROGENEOUS FLUIDS, AND SIMILITUDE FOR FLOW OF TWO FLUIDS. EACH CHAPTER CONTAINS A COMPLETE LIST OF REFERENCES AND A SET OF PROBLEMS AND STUDY QUESTIONS.

AVAILABILITY: WATER RESOURCE PUBLICATIONS, P.O. BOX 303, FORT COLLINS, CO 80522

IRIS ACCESSION NUMBER: EW004415

PUBLICATION DATE: 78

TITLE: DISCHARGE MEASUREMENT STRUCTURES.

PERSONAL AUTHOR: BOS, M. G.

DESCRIPTOR: *DESIGN; *ENGINEERING; *EQUIPMENT; *FLUID FLOW; *FLUID MEASUREMENT; *FLUID MECHANICS; *FACILITIES; *HYDROLOGY; *INSTRUCTIONAL MATERIALS; *OPERATIONS; WATER RESOURCES; *WATER MEASUREMENT

DESCRIPTIVE NOTE: 464P.

ABSTRACT: THIS BOOK PRESENTS INSTRUCTIONS, STANDARDS, AND PROCEDURES FOR THE SELECTION, DESIGN, AND USE OF STRUCTURES, WHICH MEASURE OR REGULATE THE FLOW RATE IN OPEN CHANNELS. IT IS INTENDED TO SERVE AS A GUIDE TO GOOD PRACTICE FOR ENGINEERS CONCERNED WITH THE DESIGN AND OPERATION OF SUCH STRUCTURES BY: (1) GIVING THE HYDRAULIC THEORY RELATED TO DISCHARGE MEASUREMENT STRUCTURES, (2) INDICATING THE MAJOR DEMANDS MADE UPON SUCH STRUCTURES, AND (3) PROVIDING SPECIALIZED AND TECHNICAL KNOWLEDGE ON THE MORE COMMON TYPES OF STRUCTURES NOW BEING USED THROUGHOUT THE WORLD.

AVAILABILITY: INTERNATIONAL INSTITUTE FOR LAND RECLAMATION 8 IMPROVEMENT/ ILRI, P.O. BOX 45, 6700 AA WAGENINGEN NETHERLANDS

IRIS ACCESSION NUMBER: EW004463

PUBLICATION DATE: 73

TITLE: DEVELOPING WATER RATES-PROCEEDINGS FROM AWWA SEMINAR.

DESCRIPTOR: *FINANCES; *REVENUE; *SEMINAR PROCEEDINGS; *WATER SUPPLY; *WATER RATES; *WATER UTILITIES

DESCRIPTIVE NOTE: 56P. PRICE: $3.00, NO. 20124

ABSTRACT: THESE PROCEEDINGS ARE THE PAPERS PRESENTED AT A ONE DAY SEMINAR ON DEVELOPING WATER RATES, PRESENTED BY THE AMERICAN WATER WORKS ASSOCIATION. THE PRESENTATION IN THIS SEMINAR IS PRINCIPALLY AN EXPOSITION OF THE COST OF SERVICE ANALYSIS AND RATE DETERMINATION BASED ON CUSTOMER CLASS

RESPONSIBILITY FOR SERVICE COSTS.
AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION, 6666 W. QUINCY AVE., DENVER, CO 80235

INSTITUTION NAME: AMERICAN WATER WORKS ASSOCIATION.

IRIS ACCESSION NUMBER: EW004464

PUBLICATION DATE: 73

TITLE: MINIMIZING AND RECYCLING WATER PLANT SLUDGE. PROCEEDINGS FROM AWWA SEMINAR.

DESCRIPTOR: *FILTRATION; *FLOCCULATION; *MAGNESIUM CARBONATE; *OPERATIONS (WATER); ORGANIC POLYMERS; OXIDATION; RESOURCE RECOVERY; *RECYCLING; *SLUDGE; TURBIDITY; *WATER TREATMENT; *WASTE DISPOSAL

DESCRIPTIVE NOTE: 60P. PRICE: $3.00, NO. 20123

ABSTRACT: THESE PROCEEDINGS CONTAIN SIX PAPERS PRESENTED AT THE AMERICAN WATER WORKS SEMINAR ON MINIMIZING AND RECYCLING WATER PLANT SLUDGE. TOPICS COVERED INCLUDE: WASTE DISCHARGE REGULATIONS AND TURBIDITY STANDARDS, USE OF ORGANIC POLYMERS AND SLUDGE VOLUME REDUCTION, HIGH ENERGY MIXING AND FLOCCULATION, DIRECT FILTRATION VS. OXIDATION, MAGNESIUM CARBONATE RECYCLING AND PRACTICE IN MAGNESIUM CARBONATE RECOVERY AND REUSE.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION, 6666 QUINCY AVE., W., DENVER, CO 80235

INSTITUTION NAME: AMERICAN WATER WORKS ASSOCIATION.

IRIS ACCESSION NUMBER: EW004469

PUBLICATION DATE: 73

TITLE: THE PHYSICIAN'S GUIDE TO WATER POLLUTION.

PERSONAL AUTHOR: BELL, J. A.

DESCRIPTOR: DISEASE; *GUIDES; *HEALTH EDUCATION; *PHYSICIANS; *PUBLIC HEALTH; PATHOGENS; RADIOACTIVE MATERIALS; *POLLUTION; TOXIC SUBSTANCES; UTILITIES; WASTEWATER TREATMENT; *WATER POLLUTION CONTROL; WATER RESOURCES; WATER DEMANDS; WASTE DISPOSAL

DESCRIPTIVE NOTE: 28P. PRICE: $1.00

ABSTRACT: THIS HANDBOOK TRACES MAN'S HISTORICAL CONCERN FOR WATER POLLUTION, DESCRIBES ITS SOURCES AND TYPES, AND OUTLINES CONTROL METHODS. IT STRESSES THAT THE CONCERNED PHYSICIAN SHOULD BECOME INVOLVED AND PROVIDE SCIENTIFIC SUPPORT AND ASSISTANCE TO IMPLEMENT COMPREHENSIVE SOLUTIONS TO COMPLEX WATER QUALITY PROBLEMS.

AVAILABILITY: AMERICAN MEDICAL ASSOCIATION, P.O. BOX 821, MONROE, WI 53566

IRIS ACCESSION NUMBER: EW004470
PUBLICATION DATE: 75

TITLE: THE PHYSICIAN'S GUIDE TO INORGANIC ENVIRONMENTAL POLLUTANTS.

PERSONAL AUTHOR: BELL, J. A.

DESCRIPTOR: DISEASES; *ENVIRONMENT; *GUIDES; *HEALTH EDUCATION; *METALS; *PHYSICIANS; *PUBLIC HEALTH; *POLLUTION; TRACE ELEMENTS

DESCRIPTIVE NOTE: 68P. PRICE: $1.00

ABSTRACT: THIS HANDBOOK IS A GUIDE FOR PHYSICIANS, TO INORGANIC ENVIRONMENTAL POLLUTANTS. TWENTY-FIVE SUBSTANCES ARE EXAMINED, AND THEIR HEALTH EFFECTS AND ENVIRONMENTAL STANDARDS ARE OUTLINED. THE AUTHOR CONCLUDES THAT HEALTH SCIENTISTS, INCLUDING THE PRACTICING PHYSICIAN, SHOULD MAKE A SIGNIFICANT EFFORT TO OBTAIN AND EVALUATE THE NECESSARY FACTS CONCERNING HEALTH EFFECTS OF TRACE ELEMENTS IN THE ENVIRONMENT.

AVAILABILITY: AMERICAN MEDICAL ASSOCIATION, P.O. BOX 821 MONROE, WI 53566

IRIS ACCESSION NUMBER: EW004471

PUBLICATION DATE: 75

TITLE: THE PHYSICIAN'S GUIDE TO SOLID WASTE.

DESCRIPTOR: DISEASES; HEALTH HAZARDS; INDUSTRIAL WASTE; *INSTRUCTIONAL MATERIALS; *LANDFILLS; MANAGEMENT; *PUBLIC HEALTH; RESOURCE RECOVERY; REGULATIONS; *SOLID WASTES; *WASTE DISPOSAL

DESCRIPTIVE NOTE: 41P. PRICE: $1.00

ABSTRACT: THIS GUIDE PROVIDES INFORMATION ON THE HEALTH HAZARDS OF SOLID WASTE, THE MANAGEMENT OF WASTES (INCLUDING RESOURCE RECOVERY), AND AN OVERVIEW OF LAWS ON WASTE DISPOSAL, AND SUGGESTS HOW PHYSICIANS AND MEDICAL SOCIETIES CAN UNDERTAKE ACTIVE LEADERSHIP ROLES IN THIS FIELD. THE INFORMATION IS DESIGNED TO BE USEFUL AS ORIENTATION MATERIAL FOR PHYSICIANS CONTEMPLATING COMMUNITY SERVICE OR AS A REFERENCE FOR PHYSICIANS ENDEAVORING TO RAISE THE LEVEL OF PUBLIC AWARENESS AND SOPHISTICATION IN THE NEED FOR SOLID WASTE MANAGEMENT.

AVAILABILITY: AMERICAN MEDICAL ASSOCIATION, P.O. BOX 821, MONROE, WI 53566

INSTITUTION NAME: AMERICAN MEDICAL ASSOCIATION.

IRIS ACCESSION NUMBER: EW004501
PUBLICATION DATE: 78

TITLE: OPERATION AND MAINTENANCE OF SEWAGE TREATMENT PLANTS.

PERSONAL AUTHOR: CAMERON, WILLIAM AND CROSS, FRANK L.

DESCRIPTOR: *FACILITIES; *INSTRUCTIONAL MATERIALS; MAINTENANCE; MONITORING; *OPERATIONS (WASTEWATER); *SAFETY; *TEXTBOOKS; *WASTEWATER TREATMENT; WATER POLLUTION; WATER POLLUTION CONTROL

DESCRIPTIVE NOTE: 338P. PRICE: $35.00

ABSTRACT: THIS IS A BASIC TEXT CONCERNING THE OPERATION AND MAINTENANCE OF MUNICIPAL WASTE TREATMENT FACILITIES. INCLUDED IN THIS BOOK ARE CHAPTERS ON: TYPES OF WASTE TREATMENT PROCESSES, MAINTENANCE, MANAGEMENT, MONITORING, ENERGY OPERATIONS, PLANS, COMMON OPERATIONS, PROBLEMS AND SUGGESTED SOLUTIONS, AND PLANT SAFETY. THE APPENDICES INCLUDE A GLOSSARY OF TERMS, DETAILED INFORMATION ON LUBRICATING MATERIALS, PUMPS, VALVES, PIPE AND FITTINGS, SUGGESTED PREPARATION FOR SITE VISITS, SEWER SYSTEM EVALUATION, AND BASIC LABORATORY PROCEDURES.

AVAILABILITY: TECHNOMIC PUBLISHING COMPANY, INC., 265 POST ROAD, WEST, WESTPORT, CT 06880

IRIS ACCESSION NUMBER: EW004513

PUBLICATION DATE: 79

TITLE: ULTRATRACE METAL ANALYSIS IN BIOLOGICAL SCIENCES AND ENVIRONMENT.

PERSONAL AUTHOR: RISBY, TERENCE H.

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *BIOLOGICAL SCIENCES; *ENVIRONMENT; *LABORATORY TECHNIQUES; *METAL ANALYSIS; *METALS; TRACE ELEMENTS; *ULTRATRACE METAL ANALYSIS

DESCRIPTIVE NOTE: 263P. PRICE: $36.50

ABSTRACT: THIS BOOK CONTAINS REPORTS ON THE COLLABORATED EFFORTS OF BIOCHEMISTS, ENVIRONMENTALISTS, AND ANALYTICAL CHEMISTS WHO ARE STUDYING THE CONCENTRATION OF METALS IN ORGANISMS. SPECIFIC TOPICS INCLUDE TRACE ELEMENTS IN NUTRITION, HEALTH IMPLICATIONS IN THE ENVIRONMENT, MOLYBDENUM IN BIOLOGICAL MATERIALS, AND THE RELATION OF SERUM COPPER TO AGE. A PRELIMINARY REPORT ON NICKLE-INDUCED TRANSFORMATION IN TISSUE CULTURE IS PRESENTED ALONG WITH THE ROLE OF ZINC IN BIOCHEMICAL PROCESSES, TRACE METAL UPTAKE BY BACILLUS SUBTILIS, AND SOURCES OF ENVIRONMENTALLY IMPORTANT METALS IN THE ATMOSPHERE. ANALYSIS TECHNIQUES USED INCLUDE INDUCTIVELY COUPLED PLASMA, ATOMIC ABSORPTION AND ATOMIC EMISSION SPECTROMETRY, AND NEUTRON ACTIVATION.

AVAILABILITY: AMERICAN CHEMICAL SOCIETY, 1155 16TH STREET, N.W., WASHINGTON, DC 20036

IRIS ACCESSION NUMBER: EW004528
PUBLICATION DATE: FEB 79

TITLE: DISPOSAL OF VESSEL WASTES--SHIPBOARD AND SHORESIDE FACILITIES. PHASE ONE. BLACKWATER.

PERSONAL AUTHOR: BARTLEY, C. B.; AND OTHERS

DESCRIPTOR: *BLACKWATER; ECONOMIC FACTORS; *GREAT LAKES; *HARBOR FACILITIES; INSTRUCTIONAL MATERIALS; *OCEANOLOGY; POLLUTION; *SANITARY FACILITIES; *SEWAGE; *SEWAGE TREATMENT; *SHIPS; *WASTEWATER TREATMENT; *WASTE DISPOSAL; *WATER POLLUTION CONTROL

DESCRIPTIVE NOTE: 231P. PRICE: $9.50

ABSTRACT: THE EXISTING TECHNICAL SOLUTIONS TO BLACKWATER WASTE DISPOSAL PROBLEMS OF GREAT LAKES COMMERCIAL VESSELS WERE DEFINED AND DOCUMENTED BY CONDUCTING A SURVEY OF SHIP AND PORT OPERATORS. THE PROBLEMS, POSED BY WINTER CONDITIONS TO THE OPERATIONS AND PERFORMANCE OF WASTE DISPOSAL FACILITIES, WERE EXAMINED AND ANALYZED FOR A PROJECTED WINTER NAVIGATION SEASON. SHORESIDE DISPOSAL FACILITIES WERE INVENTORIED FOR NUMBER, TYPE, LIMITATIONS, WINTER WEATHER PROBLEMS AND TECHNICAL SOLUTIONS TO THESE PROBLEMS. SHIPBOARD FACILITIES AND MARINE SANITATION DEVICES WERE EVALUATED FOR TREATMENT PERFORMANCE AND OPERATION UNDER GENERAL AND WINTER CONDITIONS. THE EFFECTS OF BLACKWATER TREATED BY MARINE SANITATION SYSTEMS ON THE GREAT LAKES ECOSYSTEM WERE EVALUATED FOR SHORT AND LONG TERM IMPACTS DURING AN EXTENDED AS WELL AS NORMAL NAVIGATION SYSTEM. VARIOUS STATE AND FEDERAL BLACKWATER DISPOSAL REGULATIONS WERE DISCUSSED AND THE ECONOMIC EFFECTS OF THESE REGULATIONS ON SHIP OPERATIONS WERE EVALUATED. SPECIAL ATTENTION WAS GIVEN TO HOLD TANK DESIGN AND COSTS.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, OPERATIONS DIVISION, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW004536

PUBLICATION DATE: JUL 76

TITLE: THE NATIONAL SAFE DRINKING WATER ACT.

PERSONAL AUTHOR: HERNANDEZ, JOHN W.; BARKLEY, WILLIAM A.

DESCRIPTOR: *DRINKING WATER; *FEDERAL LEGISLATION; FEDERAL PROGRAMS; FEDERAL REGULATIONS; *GROUNDWATER; *INSTRUCTIONAL MATERIALS; *NATIONAL INTERIM PRIMARY DRINKING WATER REGULATIONS; POINT POLLUTION; *SAFE DRINKING WATER ACT; *WATER QUALITY; *WATER POLLUTION CONTROL; *WATER STANDARDS; *WATER SUPPLY

DESCRIPTIVE NOTE: 108P. FREE WHILE THE SUPPLY LASTS

ABSTRACT: PRESENTED IS A DETAILED DISCUSSION OF THE SAFE DRINKING WATER ACT, P.L. 93-523. INCLUDED IN THE DISCUSSION ARE: (1) THE RELATIONSHIPS BETWEEN THE SAFE DRINKING WATER ACT AND THE FEDERAL WATER POLLUTION CONTROL ACT, (2) THE PROVISIONS OF THE SAFE DRINKING WATER ACT INCLUDING THE

APPLICABILITY OF THE ACT AND REGULATIONS CONCERNING THE ENFORCEMENT OF THE ACT, AND (3) A DISCUSSION OF THE GROUNDWATER REGULATIONS WHICH IS A MAJOR PORTION OF THE ACT. THE REMAINING PORTION OF THE BOOK IS A DETAILED DISCUSSION OF THE NATIONAL INTERIM PRIMARY DRINKING WATER REGULATIONS WHICH WERE IN EFFECT FROM DECEMBER 24, 1975 UNTIL THE EFFECTIVE DATE OF THE SAFE DRINKING WATER ACT WHICH WAS JUNE 24, 1977. AMONG THE TOPICS OF DISCUSSION FOR THESE REGULATIONS ARE: (1) MAXIMUM CONTAMINANT LEVELS, (2) MONITORING AND REPORTING OF CONTAMINANT LEVELS, (3) A BIBLIOGRAPHY FOR ANALYTIC TECHNIQUES FOR DETERMINING CONTAMINANT LEVELS, AND (4) SANITARY SURVEYS. INCLUDED ARE APPENDICES GIVING THE MAXIMUN CONTAMINANT LEVELS FOR RADIOACTIVITY AND ELEMENTS OF THE DRAFT VERSIONS OF UNDERGROUND INJECTION REGULATIONS OF THE NATIONAL SAFE DRINKING WATER ACT.

AVAILABILITY: NEW MEXICO STATE UNIVERSITY, COLLEGE OF ENGINEERING, BOX 3449, LAS CRUCES, NM 88003

IRIS ACCESSION NUMBER: EW004552

PUBLICATION DATE: MAY 79

TITLE: SEPTIC TANK AND HOUSEHOLD SEWAGE SYSTEMS DESIGN AND USE. CITATIONS FROM THE NTIS DATA BASE. SEARCH PERIOD-1964- MAY 1979.

DESCRIPTOR: ACTIVATED SLUDGE; *BIBLIOGRAPHIES; *ANNOTATED BIBLIOGRAPHIES; DESIGN; EFFLUENTS; *HOUSEHOLD SEWAGE SYSTEMS; NON-SEPTIC TREATMENT SYSTEMS; PLANNING; REGULATIONS; *SEPTIC TANKS; SOILS; WATER POLLUTION; *WASTE DISPOSAL; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 150P. PRICE: $28.00

ABSTRACT: THIS BIBLIOGRAPHY OF FEDERALLY-FUNDED RESEARCH PRESENTS ABSTRACTS ON THE DESIGN AND REGULATIONS FOR SEPTIC TANKS, AS WELL AS NON-SEPTIC TREATMENT SYSTEMS. SUBJECTS INCLUDED ARE SOIL PROPERTIES, WATER POLLUTION, REGULATIONS, AND PLANNING FOR SEPTIC SYSTEMS. (THIS UPDATED BIBLIOGRAPHY CONTAINS 142 ABSTRACTS, 14 OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION).

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, OPERATIONS DIVISION, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW004555

PUBLICATION DATE: FEB 79

TITLE: TECHNICAL MANUAL FOR THE MEASUREMENT AND MODELING OF NON-POINT SOURCES AT AN INDUSTRIAL SITE ON A RIVER.

PERSONAL AUTHOR: BROOKMAN, G. T.; AND OTHERS

DESCRIPTOR: DUST; FIELD SURVEYS; *INDUSTRIES; LEACHING; *MATHEMATICAL MODELS; *MEASUREMENT; *MONITORING; *NONPOINT SOURCE POLLUTION; *POLLUTION; *RIVERS; RUNOFF; UTILITIES; *WATER POLLUTION CONTROL

DESCRIPTIVE NOTE: 83P. PRICE: $6.00

ABSTRACT: THE MANUAL PROVIDES A GUIDE FOR THE IMPLEMENTATION OF A MEASUREMENT AND MODELING PROGRAM FOR NON-POINT SOURCES AT AN INDUSTRIAL SITE ON A RIVER. CRITERIA FOR DEVELOPING A FIELD SURVEY PROGRAM AND MODEL SELECTION ARE PROVIDED, ALONG WITH PROGRAM COSTS AND MANPOWER REQUIREMENTS. A SAMPLE LIST OF EQUIPMENT AND COMPUTER COSTS IS ALSO INCLUDED. THE DEVELOPEMENT OF A FIELD SURVEY INCLUDES A SAMPLE SITE SELECTION, SELECTION OF PARAMETERS TO BE MEASURED, NUMBER AND FREQUENCY OF SAMPLES, COLLECTION METHODS, ANALYTICAL METHODS, AND DATA REDUCTION AND ANALYSIS. INCLUDED IN THE MODELING SECTION IS A DESCRIPTION OF THE SSWMM-RECEIV-II MODEL WHICH HAS BEEN ADAPTED TO A COAL-FIRED UTILITY SITE. APPLICATION OF THE OUTLINED PROCEDURES TO THE MEASUREMENT OF NON-POINT SOURCES FROM A COAL-FIRED UTILITY IS ALSO PRESENTED.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, OPERATIONS DIVISION, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW004557

PUBLICATION DATE: MAR 79

TITLE: SELECTED BIODEGRADATION TECHNIQUES FOR TREATMENT AND/OR ULTIMATE DISPOSAL OF ORGANIC MATERIALS.

DESCRIPTOR: *AERATION; *ACTIVATED SLUDGE; *BIODEGRADATION TECHNIQUES; *BIOLOGICAL TREATMENT; *EFFLUENTS; COST EFFECTIVENESS; DESIGN; COMPARATIVE ANALYSIS; INDUSTRIAL WASTES; LAGOONS; *MANAGEMENT; *ORGANIC COMPOUNDS; *ORGANIC WASTES; *WASTEWATER TREATMENT; *WASTE DISPOSAL

DESCRIPTIVE NOTE: 379P. PRICE: $13.00

ABSTRACT: ORGANIC CONSTITUENTS IN EFFLUENTS FROM VARIOUS INDUSTRIES OFTEN HAVE PROPERTIES NOT READILY TREATABLE BY CONVENTIONAL BIOLOGICAL PROCESSES. FOR THIS REASON, RESEARCH WAS CONDUCTED TO IDENTIFY, CHARACTERIZE, AND COMPARE TYPES OF BIOLOGICAL TREATMENT PROCESSES AND OPERATIONAL METHODS THAT SUCCESSFULLY HANDLE PROBLEMATIC ORGANIC INDUSTRIAL WASTES. THE OBJECTIVES OF THE TECHNOLOGY COMPARISONS ARE TO IDENTIFY THE MOST ROBUST BIOLOGICAL TREATMENT TECHNIQUES (APPLICABLE TO THE BROADEST RANGE OF WASTE CLASSES) AND TO DESCRIBE THOSE TREATMENT CHARACTERISTICS THAT SPECIFICALLY ENHANCE BIODEGREDATION OF ORGANIC WASTES. DESIGN, PERFORMANCE, AND ECONOMIC COMPARISONS OF BIOLOGICAL TREATMENT TECHNOLOGIES ARE PRESENTED TO ASSIST WASTE MANAGERS AND ENGINEERS IN THE SELECTION OF PROPER TREATMENT METHODS. THE TREATMENT TECHNOLOGIES STUDIED WERE ACTIVATED SLUDGE, SERIES LAGOONS, DEEP SHAFT AERATION, AND PURE OXYGEN BIOLOGICAL SYSTEMS.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, OPERATIONS DIVISION, SPRINGFIELD, VA 22161

INSTITUTION NAME: SCS ENGINEERS.

IRIS ACCESSION NUMBER: EW004558
PUBLICATION DATE: MAR 79

TITLE: THE CHEMISTRY OF DISINFECTANTS IN WATER; REACTIONS AND PRODUCTS.

DESCRIPTOR: *BIBLIOGRAPHIES; *CHEMISTRY; CHLORINE; CHLORAMINES; *CHLORINE DIOXIDE; DRINKING WATER; *DISINFECTION; HALOGENS; OZONE; PUBLIC HEALTH; POTABLE WATER; *WATER TREATMENT; *WATER RESOURCES

DESCRIPTIVE NOTE: 209P. PRICE: $9.25

ABSTRACT: THE REPORT BEGINS WITH A PRELIMINARY DISCUSSION OF THE CHARACTER OF NATURAL ORGANIC SUBSTANCES FROM WHICH BY-PRODUCTS OF ORGANIC DISINFECTANTS ARE THOUGHT TO ORIGINATE. SUBSEQUENT SECTIONS DESCRIBE THE CHEMISTRY OF CHLORINE, CHLORAMINES, HALOGENS (BROMINE AND IODINE), CHLORINE DIOXIDE, AND FINALLY OZONE. THE REPORT CONTAINS A SIGNIFICANT BIBLIOGRAPHY.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, OPERATIONS DIVISION, SPRINGFIELD, VA 22161

INSTITUTION NAME: NATIONAL TECHNICAL INFORMATION SERVICE.

IRIS ACCESSION NUMBER: EW004561

PUBLICATION DATE: JAN 79

TITLE: INTEGRATING WATER RESOURCES AND LAND USE PLANNING.

PERSONAL AUTHOR: MULDER, JIM; AND OTHERS

DESCRIPTOR: *COST STUDIES; HISTORY; INSTITUTIONAL ISSUES; *LAND USE; *MODELING; *PLANNING; VALUES; *WATER RESOURCES

DESCRIPTIVE NOTE: 121P. PRICE: $6.50

ABSTRACT: THIS REPORT ANALYZES INFORMATION AND PRESENTS RECOMMENDATIONS FOR INTEGRATING WATER RESOURCES AND LAND USE PLANNING. THE APPROACH THAT WAS USED INCLUDES SIX BASIC COMPONENTS: 1) THE CLARIFICATION OF CURRENT PLANNING THEORY AS IT PERTAINS TO BOTH WATER AND LAND USE PLANNING, 2) ANALYSIS AND REVIEW OF HISTORICAL AND CURRENT LAND USE PLANNING PRACTICES, 3) ANALYSIS AND REVIEW OF HISTORICAL AND CURRENT WATER PLANNING PRACTICES, 4) IDENTIFICATION OF PROBLEMS AND CONCEPTS WHICH WOULD AFFECT THE INTEGRATION OF LAND AND WATER PLANNING, 5) THE DESIGN OF A CONCEPTUAL FRAMEWORK WHICH WOULD FACILITATE THE INTEGRATION OF LAND AND WATER PLANNING, AND 6) A CASE STUDY OF A SELECTED PLANNING REGION FOR SMALL SCALE APPLICATIONS OF THE MODEL.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, OPERATIONS DIVISION, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW004568
PUBLICATION DATE: JAN 80

TITLE: LAW IN BRIEF: TOXIC SUBSTANCES CONTROL ACT.

PERSONAL AUTHOR: SULLIVAN, THOMAS F. P.

DESCRIPTOR: *CHEMICAL INDUSTRY; *ENVIRONMENT; ECOLOGY; *FEDERAL LEGISLATION; *FEDERAL REGULATIONS; *LEGISLATION; PUBLIC HEALTH; POLLUTION; *REGULATIONS; *TOXIC SUBSTANCES; *TOXIC SUBSTANCES CONTROL ACT

DESCRIPTIVE NOTE: 33-34P.

ABSTRACT: ARTICLE REVIEWS THE STATUTORY REQUIREMENTS, INTENTION AND PRESENT STATUS OF THE 1976 TOXIC SUBSTANCES CONTROL ACT. CONTAINS INFORMATION ON THE ENVIRONMENTAL PROTECTION AGENCY'S ACTIONS NECESSARY TO FULFILL THE LETTER OF THE LAW. THESE ACTIONS INVOLVE ASSEMBLING AN INVENTORY, TESTING, REPORTING, A PREMANUFACTURE NOTIFICATION PROGRAM, AND CONTROLLING UNREASONABLE RISKS.

AVAILABILITY: POLLUTION ENGINEERING: V12 N1

IRIS ACCESSION NUMBER: EW004569

PUBLICATION DATE: DEC 78

TITLE: DEVELOPMENT OF CONTOC MONITOR.

PERSONAL AUTHOR: WEST, STEVEN; AND OTHERS

DESCRIPTOR: *ANALYTICAL TECHNIQUES; CHEMICAL ANALYSIS; *CARBON; *INDUSTRIES; *LABORATORY PROCEDURES; MONITORING; *MUNITIONS PLANTS; *NITRATES; *SPECIFIC CONDUCTANCE; *WATER QUALITY; WASTE TREATMENT

DESCRIPTIVE NOTE: 81P. PRICE: $6.00

ABSTRACT: THIS REPORT DESCRIBES THE DEVELOPEMENT OF AN INSTRUMENT CAPABLE OF AUTOMATIC UNATTENDED RECORDING OF SPECIFIC CONDUCTANCE, ORGANIC NITRATE, AND TOTAL ORGANIC CARBON CONTENT OF TREATED EFFLUENT WATERS FROM MUNITIONS PLANTS.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, OPERATIONS DIVISION, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW004570

PUBLICATION DATE: JUN 79

TITLE: THE CIRCULATION OF CARCINOGENS IN THE ENVIRONMENT.

PERSONAL AUTHOR: SHABAD, L. M.

DESCRIPTOR: ANALYTICAL TECHNIQUES; AIR POLLUTION; *CARCINOGENS; *CANCER; *ENVIRONMENT; *EPIDEMIOLOGY; HYGIENE; OCCUPATIONAL CANCER; *PUBLIC HEALTH; *SOIL POLLUTION;

*TOXICOLOGY; *WATER POLLUTION
DESCRIPTIVE NOTE: 412P. PRICE: $16.00

ABSTRACT: THIS REPORT BRIEFLY OUTLINES THE EPIDEMIOLOGY OF CANCER AND INVESTIGATES THE LITERATURE ON OCCUPATIONAL CANCER; IT ALSO DETAILS THE CHARACTERISTICS, ACTION MECHANISMS, SYNERGISM, ETIOLOGY AND CHEMICAL COMPONENTS OF BLASTOMOGENIC SUBSTANCES. CONTAINS DISCUSSION OF AIR, WATER AND SOIL POLLUTION WITH CARCINOGENS, EXAMINES THE EVIDENCE OF POSSIBLE BLASTOMOGENIC SUBSTANCES IN CERTAIN COSMETICS AND MEDICINES, AND ANALYZES THE MECHANISMS BY WHICH CARCINOGENS CAN CONTAMINATE FOOD PRODUCTS. INCLUDES METHODOLOGY FOR DETERMINATION OF BLASTOMOGERIC SUBSTANCES IN THE ENVIRONMENT, EVALUATES POSSIBLE SOURCES OF THE POLLUTION, CITES PREVENTION METHODS AND RECOMMENDS HYGENIC NORMS FOR CARCINOGENS.

AVAILABILITY: NTIS, OPERATIONS DIVISION, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW004576

PUBLICATION DATE: OCT 78

TITLE: OCCUPATIONAL SAFETY AND HEALTH PROGRAM GUIDELINES FOR COLLEGES AND UNIVERSITIES; AN ADMINISTRATIVE RESOURCE MANUAL.

PERSONAL AUTHOR: GODBEY, FRANK W.; HATCH, LOREN L.

DESCRIPTOR: *ACCIDENT PREVENTION; ADMINISTRATION; *COLLEGES; FEDERAL AGENCIES; *HIGHER EDUCATION; INJURIES; ILLNESS; INSPECTION PROCEDURES; LEGISLATION; *OCCUPATIONAL SAFETY; *OCCUPATIONAL HEALTH; *PROGRAM GUIDELINES; RULES; *REGULATIONS; *SAFETY; *STANDARDS; TRAINING; *UNIVERSITIES

DESCRIPTIVE NOTE: 95P. PRICE: $6.50

ABSTRACT: THIS BOOK PRESENTS THE BASICS FOR ESTABLISHING A COMPREHENSIVE OCCUPATIONAL SAFETY AND HEALTH PROGRAM IN A COLLEGE OR UNIVERSITY, THE PURPOSE OF WHICH IS TO REDUCE THE NUMBER AND SEVERITY OF JOB-RELATED INJURIES AND ILLNESSES. IT IS INTENDED TO BE MOST RELEVANT TO THOSE CAMPUSES WITH A LIMITED OSH PROGRAM OR WITH NO FORMAL PROGRAM AT ALL. ON CAMPUSES WHERE A PROGRAM ALREADY EXISTS, THE MANUAL CAN PROVIDE SUGGESTIONS FOR SUPPLEMENTARY ACTIVITIES. THE PHILOSOPHY BEHIND THE NEED FOR AN OSH PROGRAM, THE CONSIDERATIONS NECESSARY FOR ORGANIZING A PROGRAM, AND THE DETAILS OF ADMINISTRATIVE AND FINANCIAL SUPPORT NECESSARY FOR ITS EXISTENCE ARE PRESENTED. AN EXTENSIVE LIST OF RESOURCE MATERIALS AND ORGANIZATIONS IS ALSO INCLUDED.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, OPERATIONS DIVISION, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW004584
PUBLICATION DATE: 79

TITLE: ACTIVATED CARBON. PART 1. WASTEWATER TREATMENT VOLUME 2. 1976-JUNE 1979.

DESCRIPTOR: *ACTIVATED CARBON; *BIBLIOGRAPHIES; ECONOMICS; *ENGINEERING; RESEARCH; *INDUSTRIAL WASTES; *SEWAGE; *WASTEWATER TREATMENT; WATER POLLUTION CONTROL; *WATER TREATMENT

DESCRIPTIVE NOTE: 218P. PRICE: $28.00

ABSTRACT: THESE CITATIONS FROM A WORLDWIDE LITERATURE SURVEY COVER ACTIVATED CARBON AS IT IS USED IN TREATING INDUSTRIAL AND SEWAGE WASTES RELATIVE TO PROCESS DESCRIPTION, ECONOMICS, MATHEMATICAL MODELS, PERFORMANCE, AND THE PROPERTY CHANGES THE CARBON UNDERGOES. THIS UPDATED BIBLIOGRAPHY CONTAINS 218 ABSTRACTS, 62 OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, OPERATIONS DIVISION, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW004585

PUBLICATION DATE: AUG 78

TITLE: STATE OF KNOWLEDGE IN LAND TREATMENT OF WASTEWATER. VOLUME 11.

PERSONAL AUTHOR: MCKIM, H. L.

DESCRIPTOR: AGRICULTURE; DESIGN; *EFFLUENTS; HEALTH CONSIDERATIONS; *LAND APPLICATION; *LAND USE; LEGISLATION; MONITORING; *OPERATIONS (WASTEWATER); *SEWAGE; *WASTE DISPOSAL; *WASTEWATER TREATMENT; WATER TREATMENT

DESCRIPTIVE NOTE: 423P. PRICE: $13.25

ABSTRACT: THIS INTERNATIONAL SYMPOSIUM SUMMARIZED THE STATE OF KNOWLEDGE OF THE PRACTICAL ASPECTS OF THE TREATMENT OF WASTEWATER BY LAND APPLICATION AND IDENTIFIED THE SUITABLE APPROACHES FOR THE DESIGN OF SUCH LAND TREATMENT SYSTEMS. TOPICS INCLUDED ARE: SITE SELECTION, CASE STUDIES OF NATIONAL AND INTERNATIONAL CONCERN, HEALTH EFFECTS OF LAND TREATMENT SYSTEMS, PRETREATMENT CONSIDERATIONS, USES OF WASTEWATER IN AGRICULTURAL AND FOREST SYSTEMS, MONITORING, MODELING, AND DESIGN CRITERIA. THIS VOLUME CONTAINS 53 PAPERS ON ONGOING RESEARCH.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, OPERATIONS DIVISION, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW004586

PUBLICATION DATE: JAN 79

TITLE: HAZARDOUS MATERIALS SPILL MONITORING: SAFETY HANDBOOK AND CHEMICAL HAZARD GUIDE: PART A.

DESCRIPTOR: *CHEMICALS; CHEMISTRY; CHEMICAL PROPERTIES; CHEMICAL REACTIVITY; *FIRST AID; GUIDES; *HAZARDOUS MATERIALS; INDUSTRIAL SAFETY; *INSTRUCTIONAL MATERIALS; PROTECTIVE EQUIPMENT; *SAFETY; *SPILLS; TOXICITY; *TOXIC SUBSTANCES; *CHEMICAL SPILLS

DESCRIPTIVE NOTE: 40P. PRICE: $4.50

ABSTRACT: THIS TWO-PART DOCUMENT IS INTENDED TO SERVE AS A GUIDE TO THE HAZARDS ASSOCIATED WITH A BROAD RANGE OF CHEMICAL COMPOUNDS WHICH MAY BE ENCOUNTERED IN HAZARDOUS MATERIALS SPILLS. THIS DOCUMENT ADDRESSES 655 CHEMICALS IDENTIFIED ON THE BASIS OF KNOWN TOXICITY OR SPILL HISTORY AND DESIGNATED ''HAZARDS'' BY THE U.S. ENVIRONMENTAL PROTECTION AGENCY. PART A OF THIS DOCUMENT IS A SAFETY AND FIRST AID REFERENCE FOR PERSONNEL RESPONDING TO SPILLS OF HAZARDOUS MATERIALS WHICH MAY INVOLVE ANY OF THE CHEMICALS ADDRESSED. IT INCLUDES SAFETY CONSIDERATIONS, FIRST AID PROCEDURES, DESCRIPTIONS OF PROTECTIVE EQUIPMENT, AND A HAZARD RATING AND REPORTED SPILL FREQUENCY. PART B OF THIS DOCUMENT IS AN INDEX OF THE 655 CHEMICALS. IT INCLUDES A DATA SHEET FOR EACH CHEMICAL SHOWING ITS CAS NUMBER, SYNONYMS, HAZARD PRIORITY NUMBER, SAFETY MEASURES, AND INFORMATION ON EXPOSURE.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, OPERATIONS DIVISION, SPRINGFIELD, VA 22161

INSTITUTION NAME: NATIONAL TECHNICAL INFORMATION SERVICE.

IRIS ACCESSION NUMBER: EW004588

PUBLICATION DATE: AUG 78

TITLE: STATE OF KNOWLEDGE IN LAND TREATMENT OF WASTEWATER. VOLUME 1. INTERNATIONAL SYMPOSIUM 20-25 AUGUST 1978.

PERSONAL AUTHOR: MCKIM, H. L.

DESCRIPTOR: AGRICULTURE; DESIGN; *EFFLUENTS; HEALTH CONSIDERATIONS; *LAND APPLICATION; *LAND USE; *LAND TREATMENT; LEGISLATION; MONITORING; *OPERATIONS (WASTEWATER); *SEWAGE; *WASTE DISPOSAL; *WASTEWATER TREATMENT; WATER TREATMENT

DESCRIPTIVE NOTE: 435P. PRICE: $14.00

ABSTRACT: THIS INTERNATIONAL SYMPOSIUM SUMMARIZED THE STATE OF KNOWLEDGE OF THE PRACTICAL ASPECTS OF THE TREATMENT OF WASTEWATER BY LAND APPLICATION AND IDENTIFIED THE SUITABLE APPROACHES FOR THE DESIGN OF SUCH LAND TREATMENT SYSTEMS. TOPICS INCLUDED ARE: SITE SELECTION CONSIDERATIONS, CASE STUDIES OF NATIONAL AND INTERNATIONAL CONCERN, HEALTH EFFECTS OF LAND TREATMENT SYSTEMS, PRETREATMENT CONSIDERATIONS, USES OF WASTEWATER IN AGRICULTURAL AND FOREST SYSTEMS, MONITORING, MODELING, AND DESIGN CRITERIA. THIS VOLUME CONTAINS 46 INVITED PAPERS.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, OPERATIONS DIVISION, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW004590

PUBLICATION DATE: JUN 79

TITLE: WATER SUPPLY FOR URBAN AREAS: PROBLEMS IN MEETING FUTURE DEMAND.

DESCRIPTOR: *CONSERVATION; DESALINATION; *FUTURE DEMAND; FEDERAL ASSISTANCE PROGRAMS; GROUND WATER; INSTITUTIONAL CONSTRAINTS; LEGAL CONSTRAINTS; MANAGEMENT; *NATURAL RESOURCES; *PLANNING; POLLUTION; REPORTS; RECYCLING; SURFACE WATER; *URBAN AREAS; *UTILITIES; *WATER SUPPLY; WATER DEMAND; WATER QUALITY

DESCRIPTIVE NOTE: 50P. PRICE: $5.25

ABSTRACT: THIS REPORT PROVIDES AN OVERVIEW OF URBAN WATER PROBLEMS. THE AUTHORS MADE THIS REVIEW TO OBTAIN INFORMATION ON WATER PROBLEMS OF URBAN AREAS AND WHAT SELECTED URBAN AREAS ARE DOING TO ASSURE AN ADEQUATE WATER SUPPLY.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, OPERATIONS DIVISION, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW004593

PUBLICATION DATE: JAN 80

TITLE: ERIE COUNTY PLANT CUTS CONSTRUCTION COSTS.

PERSONAL AUTHOR: WESTERHOFF, GARRET P.

DESCRIPTOR: *COSTS; *CONSTRUCTION; *ECONOMICS; *FACILITIES; *UTILITIES; *WASTEWATER TREATMENT; *WASTE DISPOSAL

DESCRIPTIVE NOTE: 16-18P.

ABSTRACT: DESCRIBED IS THE NEW ERIE COUNTY WASTEWATER TREATMENT PLANT. THE FACILITY WAS DESIGNED TO USE THE MOST MODERN WATER TREATMENT TECHNOLOGY AND, THUS, INSURE A SAFE, HIGH QUALITY DRINKING WATER THAT MEETS FEDERAL DRINKING WATER STANDARDS AND STATE REGULATIONS.

AVAILABILITY: WATER & WASTES ENGINEERING; V17 N1

IRIS ACCESSION NUMBER: EW004594

PUBLICATION DATE: JAN 80

TITLE: ORLANDO'S VARIABLE-RATE PUMPING STATIONS SAVE MONEY.

PERSONAL AUTHOR: BOUCK, DAVID W.; AND OTHERS

DESCRIPTOR: *COSTS; CONSTRUCTION; *ECONOMICS; FLORIDA; MAINTENANCE; *OPERATING EXPENSES; *PUMPS; *PUMPING STATIONS; *UTILITIES; *WASTEWATER TREATMENT; WATER RESOURCES; *WASTE DISPOSAL

DESCRIPTIVE NOTE: 20-23P.

ABSTRACT: DESCRIBES THE NEW ORLANDO, FLORIDA, REGIONAL WASTEWATER PUMPING FACILITIES. THE PLANT IS DESIGNED TO PROVIDE VARIABLE-RATE PUMPING WHILE MINIMIZING OPERATIONAL COMPLEXITY, RESULTING IN A SAVINGS IN CONSTRUCTIONAL, OPERATIONAL, AND MAINTENANCE COSTS.

AVAILABILITY: WATER & WASTES ENGINEERING; V17 N1

IRIS ACCESSION NUMBER: EW004595

PUBLICATION DATE: JAN 80

TITLE: TEMPORY INSTALLATION REDUCES SEWER FAILURE PROBLEMS.

PERSONAL AUTHOR: MYROLD, CLARENCE W.

DESCRIPTOR: CONSTRUCTION; *MAINTENANCE; *PUBLIC HEALTH; *SEWERS; *SEWER FAILURE; UTILITIES; *WASTEWATER COLLECTION; *WASTE DISPOSAL

DESCRIPTIVE NOTE: 25-26+32P.

ABSTRACT: DESCRIBES HOW A POTENTIAL DISASTER INVOLVING THE HEALTH, WELFARE, AND PERSONAL LOSS TO 150,000 RESIDENTS OF SEVERAL COMMUNITIES, AS WELL AS DISRUPTION OF AN ESTABLISHED MILITARY BASE, WAS AVERTED BY THE RAPID APPLICATION OF ENGINEERING PRINCIPLES AND PROMPT CONSTRUCTION WHICH MINIMIZED THE EFFECTS OF A MAJOR SANITARY TRUNK SEWER FAILURE.

AVAILABILITY: WATER & WASTES ENGINEERING; V17 N1

IRIS ACCESSION NUMBER: EW004596

PUBLICATION DATE: JAN 80

TITLE: NEW PROCEDURES CAN AID WWTP EFFICIENCY.

PERSONAL AUTHOR: COOPERWASSER, VICTOR I.

DESCRIPTOR: *COSTS; EFFICIENCY; ECONOMICS; *MAINTENANCE; *OPERATIONS (WASTEWATER); *RECORD KEEPING; *UTILITIES; *WASTEWATER TREATMENT; *WASTE DISPOSAL

DESCRIPTIVE NOTE: 34-35P.

ABSTRACT: DESCRIBES A NEW PROGRAM FOR WASTEWATER TREATMENT PLANTS WHICH SCHEDULES PREVENT MAINTENANCE AND RECORDS CORRECTIVE MAINTENANCE.

AVAILABILITY: WATER & WASTES ENGINEERING; V17 N1

IRIS ACCESSION NUMBER: EW004597

PUBLICATION DATE: 79

TITLE: INDIANA BASIC WATER TREATMENT AND DISTRIBUTION WORKBOOK.

PERSONAL AUTHOR: PHILLIPS, MICHAEL.

DESCRIPTOR: BIOLOGY; CHEMISTRY; *WATER DISTRIBUTION; *INSTRUCTIONAL MATERIALS; LEGISLATION; MATHEMATICS; *MANAGEMENT; NATURAL RESOURCES; *PLANNING; REGULATIONS; STORAGE; UTILITIES; *WATER SUPPLY; *WATER TREATMENT; WATER RESOURCES

DESCRIPTIVE NOTE: 65P. PRICE: $4.00

ABSTRACT: THIS WORKBOOK CONTAINS QUESTIONS ON THE PHYSICAL, CHEMICAL, MATHEMATICAL AND BIOLOGICAL ASPECTS OF WATER TREATMENT AND DISTRIBUTION. THE INSTITUTIONAL, TECHNOLOGICAL AND LEGAL ISSUES THAT ARE RELEVANT TO WATER RESOURCES PLANNING AND MANAGEMENT ARE PRESENTED. INCLUDED ARE DISCUSSIONS OF SOURCES OF WATER USES, AND PRESENT AND FUTURE NEEDS.

AVAILABILITY: INDIANA SECTION AWWA, 1330 WEST MICHIGAN, INDIANAPOLIS, IN 46206

IRIS ACCESSION NUMBER: EW004598

PUBLICATION DATE: 79

TITLE: INDIANA ADVANCED WATER TREATMENT WORKBOOK.

DESCRIPTOR: FILTRATION; FLOCCULATION; *GROUND WATER; *HYDROLOGY; *INSTRUCTIONAL MATERIALS; *LABORATORY PROCEDURES; *MANAGEMENT; *OPERATIONS (WATER); POLLUTANTS; PRETREATMENT; SURFACE WATER; SEDIMENTATION; *WATER RESOURCES; *WATER TREATMENT; WATER QUALTIY; WATER SOFTENING

DESCRIPTIVE NOTE: 38P. PRICE: $8.00

ABSTRACT: THIS WORKBOOK CONTAINS QUESTIONS ON WATER SOURCES, WATER TREATMENT PROCESSES, LABORATORY CONTROL TESTING AND MANAGEMENT PERSPECTIVES.

AVAILABILITY: INDIANA SECTION AWWA, 1330 WEST MICHIGAN, INDIANAPOLIS, IN 46206

INSTITUTION NAME: SHORT SCHOOL COMMITTEE.

IRIS ACCESSION NUMBER: EW004600

TITLE: THE NALCO WATER HANDBOOK.

PERSONAL AUTHOR: KEMMER, FRANK N.; MCCALLION, JOHN

DESCRIPTOR: CHEMISTRY; INDUSTRIES; *OPERATIONS (WATER); OPERATIONS (WASTEWATER); UTILITIES; *WATER SUPPLY; *WATER RESOURCES; *WATER TREATMENT; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 799P. PRICE: $28.50

ABSTRACT: THIS HANDBOOK HAS BEEN PREPARED AS A REFERENCE FOR THE MANY PROFESSIONALS WHO FROM TIME TO TIME NEED INFORMATION ON WATER AS IT RELATES TO THEIR OWN SPECIALIZED ACTIVITIES. THERE ARE FOUR SECTIONS TO THIS BOOK. THE FIRST IS AN INTRODUCTION TO THE NATURE OF WATER, DEALING WITH THE FUNDAMENTALS OF CHEMISTRY, BIOLOGY, AND WATER ANALYSIS. THE SECOND SECTION EXPLORES THE UNIT OPERATIONS OF WATER CONDITIONING. NEXT IS AN OVERVIEW OF IMPORTANT INDUSTRIAL AND MUNICIPAL USES OF WATER INCLUDING RECYCLE AND DISPOSAL. THE FOURTH SECTION INCLUDES CHAPTERS ON THE MAJOR WATER TREATMENT TECHNOLOGIES, SUCH AS TREATMENT FOR COOLING, STEAM GENERATION, AND OIL RECOVERY.

AVAILABILITY: MCGRAW-HILL BOOK COMPANY, P. O. BOX 400, HIGHSTOWN, NJ 08520

IRIS ACCESSION NUMBER: EW004609

PUBLICATION DATE: SEP 78

TITLE: SPECIAL OCCUPATIONAL HAZARD REVIEW FOR ALDRIN/DIELDRIN.

DESCRIPTOR: *ALDRIN; DIELDRIN; ENVIRONMENT; *HEALTH; *INSECTICIDES; *INDUSTRY; *ORGANOCHLORIDES; *OCCUPATIONAL HAZARDS; *PESTICIDES; REVIEWS; *STANDARDS; *SAFETY; *TOXICOLOGY

DESCRIPTIVE NOTE: 166P. PRICE: $8.00

ABSTRACT: THIS REVIEW ON ALDRIN/DIELDRIN TOXICITY SERVES AS A COMPREHENSIVE REPORT ON TWO OF THE MOST REPRESENTATIVE COMPOUNDS OF THE ORGANOCHLORIDE CLASS OF INSECTICIDES. THE REPORT EXAMINES LABORATORY STUDIES ON TERATOGENESIS, CARCINOGENSIS AND OTHER TOXIC EFFECTS ON ANIMALS. CASE STUDIES, CLINICAL REPORTS AND EPIDEMIOLOGICAL STUDIES ARE ALSO REVIEWED TO EVALUATE THE EFFECTS OF THE INSECTICIDES ON HUMANS.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, OPERATIONS DIVISION, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW004624

PUBLICATION DATE: 78

TITLE: TOLUENE: AMBIENT WATER QUALITY.

DESCRIPTOR: AQUATIC LIFE; AMBIENT WATER QUALITY CRITERIA; CARCINOGENICITY; HUMAN HEALTH; PUBLIC HEALTH; *REGULATIONS; *STANDARDS; *TOLUENE; *TOXICOLOGY; *TOXIC SUBSTANCES; *WATER QUALITY

DESCRIPTIVE NOTE: 97P. PRICE: $6.00

ABSTRACT: PRESENTED ARE THE AMBIENT WATER QUALITY CRITERIA FOR TOLUENE FOR AQUATIC LIFE AND HUMAN HEALTH. EVALUATED ARE ACUTE AND CHRONIC TOXICITY FOR FRESHWATER AND SALTWATER ORGANISMS. ANALYZED ARE HUMAN AND OTHER MAMMALS EXPOSURE TO, INGESTION OF, INHALATION OF, AND DERMAL APSORPTION OF TOLUENE. EXAMINED IS RESEARCH ON THE CHEMICAL PHARMOKINETICS (ABSORPTION, DISTRIBUTION, METABOLISM, EXCRETION) AND ITS EFFECTS (SYNERGISM, ANTAGONISM, TERATOGENICITY, MUTAGENICITY, CARCINDOGENICITY, ACUTE AND CHRONIC TOXICITY). REVIEWS EXISTING GUIDELINES AND STANDARDS, CURRENT EXPOSURE LEVELS AND SPECIAL RISK GROUPS TO FORMULATE AMBIENT WATER QUALITY.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, OPERATIONS DIVISION, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW004625

PUBLICATION DATE: 78

TITLE: PHTHALATE ESTERS: AMBIENT WATER QUALITY CRITERIA.

DESCRIPTOR: *AMBIENT WATER QUALITY CRITERIA; CHEMISTRY; CARCINOGENICITY; HUMAN HEALTH; *PHTHALATE ESTERS; PUBLIC HEALTH; REGULATIONS; *TOXICOLOGY; *TOXIC SUBSTANCES; *WATER QUALITY

DESCRIPTIVE NOTE: 114P. PRICE: $6.50

ABSTRACT: PRESENTED ARE THE AMBIENT WATER QUALITY CRITERIA FOR PHTHALATE ESTERS FOR AQUATIC LIFE AND HUMAN HEALTH, USING AVAILABLE INFORMATION AND CURRENT RESEARCH DATA. EVALUATES ACUTE AND CHRONIC TOXICITY FOR FRESHWATER AND SALTWATER ORGANISMS. ANALYZES HUMAN AND OTHER MAMMALS EXPOSURE TO, INGESTION OF, INHALATION OF, AND DERMAL ABSORPTION OF PHTHALATE ESTERS. EXAMINES RESEARCH ON THE CHEMICAL PHARMOKINETICS (ABSORPTION, DISTRIBUTION, METABOLISM, EXCRETION) AND ITS EFFECTS (SYNERGISM, ANTAGONISM, TERATOGENICITY, MUTAGENICITY, CARCINOGENICITY, ACUTE AND CHRONIC TOXICITY). REVIEWS EXISTING GUIDELINES AND STANDARDS, CURRENT EXPOSURE LEVELS AND SPECIAL RISK GROUPS.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, OPERATIONS DIVISION, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW004626

PUBLICATION DATE: 78

TITLE: HALOMETHANES: AMBIENT WATER QUALITY CRITERIA.

DESCRIPTOR: *AMBIENT WATER QUALITY CRITERIA; CHEMISTRY; CARCINOGENICITY; *HALOMETHANES; HUMAN HEALTH; MUTAGENICITY; *PUBLIC HEALTH; *REGULATIONS; *TOXICOLOGY; *TOXIC SUBSTANCES; *WATER QUALITY

DESCRIPTIVE NOTE: 142P. PRICE: $7.25

ABSTRACT: PRESENTED ARE THE AMBIENT WATER QUALITY CRITERIA FOR HALOMETHANES FOR AQUATIC LIFE AND HUMAN HEALTH, USING AVAILABLE INFORMATION AND CURRENT RESEARCH DATA. EVALUATES ACUTE AND CHRONIC TOXICITY FOR FRESHWATER AND SALTWATER ORGANISMS. ANALYZES HUMAN AND OTHER MAMMALS EXPOSURE TO, INGESTION OF, INHALATION OF, AND DERMAL ABSORPTION OF HALOMETHANES. EXAMINES RESEARCH ON THE CHEMICAL PHARMOKINETICS (ABSORPTION, DISTRIBUTION, METABOLISM, EXCRETION) AND ITS EFFECTS (SYNERGISM, ANTAGONISM, TERATOGENICITY, MUTAGENICITY, CARCINOGENICITY, ACUTE, AND CHRONIC TOXICITY). REVIEWS EXISTING EXPOSURE LEVELS AND SPECIAL RISK GROUPS.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, OPERATIONS DIVISION, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW004627

PUBLICATION DATE: 78

TITLE: NICKLE: AMBIENT WATER QUALITY CRITERIA.

DESCRIPTOR: AQUATIC LIFE; AMBIENT WATER QUALITY CRITERIA; HUMAN HEALTH; METALS; *NICKLE; PUBLIC HEALTH; *REGULATIONS; *STANDARDS; *TOXICOLOGY; *TOXIC SUBSTANCES; *WATER QUALITY

DESCRIPTIVE NOTE: 182P. PRICE: $8.00

ABSTRACT: PRESENTED ARE THE AMBIENT WATER QUALITY CONDITIONS FOR NICKLE FOR AQUATIC LIFE AND HUMAN HEALTH, USING AVAILABLE INFORMATION AND CURRENT RESEARCH DATA. EVALUATED ARE ACUTE AND CHRONIC TOXICITY FOR FRESHWATER AND SALTWATER ORGANISMS. ANALYZED ARE HUMAN AND OTHER MAMMALS EXPOSURE TO, INGESTION OF, INHALATION OF, AND DERMAL ABSORPTION OF NICKLE. EXAMINED ARE RESEARCH ON THE CHEMICAL PHARMOKINETICS (ABSORPTION, DISTRIBUTION, METABOLISM, EXCRETION) AND ITS EFFECTS (SYNERGISM, ANTAGONISM, TERATOGENICITY, MUTAGENICITY, CARCINOGENICITY, ACUTE, AND CHRONIC TOXICITY). REVIEWS EXISTING GUIDELINES AND STANDARDS, CURRENT EXPOSURE LEVELS AND SPECIAL RISK GROUPS TO FORMULATE THE AMBIENT WATER QUALITY CRITERIA.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, OPERATIONS DIVISION, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW004628

PUBLICATION DATE: 78

TITLE: DIPHENYLHYDRAZINE: AMBIENT WATER QUALITY CRITERIA.

DESCRIPTOR: AMBIENT WATER QUALITY CRITERIA; CARCINOGENS; *DIPHENYLHYDRAZINE; *STANDARDS; *TOXIC SUBSTANCES; *WATER QUALITY; *WATER POLLUTION CONTROL

DESCRIPTIVE NOTE: 40P. PRICE: $4.50

ABSTRACT: THIS REPORT PRESENTS WATER QUALITY CRITERIA FOR DIPHENYLHYDRAZINE. IT PRESENTS CONCENTRATION CRITERIA FOR THE PROTECTION OF FRESHWATER AND SALTWATER AQUATIC LIFE. IT PRESENTS SAFE CONCENTRATIONS FOR HUMANS, AND IN THE CASE OF SUSPECT OR PROVEN CARCINOGENS, GIVES VARIOUS LEVELS OF INCREMENTAL CANCER RISE.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, OPERATIONS DIVISION, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW004630

PUBLICATION DATE: 78

TITLE: CYANIDES: AMBIENT WATER QUALITY CRITERIA.

DESCRIPTOR: *AMBIENT WATER QUALITY CRITERIA; *CYANIDES; CHEMISTRY; CARCINOGENICITY; HUMAN HEALTH; PUBLIC HEALTH; *REGULATIONS; *TOXICOLOGY; *TOXIC SUBSTANCES; *WATER QUALITY

DESCRIPTIVE NOTE: 79P. PRICE: $6.00

ABSTRACT: PRESENTED ARE THE AMBIENT WATER QUALITY CRITERIA FOR CYANIDES FOR AQUATIC LIFE AND HUMAN HEALTH, USING AVAILABLE INFORMATION AND CURRENT RESEARCH DATA. EVALUATES ACUTE AND CHRONIC TOXICITY FOR FRESHWATER AND SALTWATER ORGANISMS. ANALYZES HUMAN AND OTHER MAMMALS EXPOSURE TO, INGESTION OF, INHALATION OF, AND DERMAL ABSORPTION OF CYANIDES. EXAMINES RESEARCH IN THE CHEMICAL PHARMOKINETICS (ABSORPTION, DISTRIBUTION, METABOLISM, EXCRETION) AND ITS EFFECTS (SYNERGISM, ANTAGONISM, TERATOGENICITY, MUTAGENICITY, CARCINOGENICITY, ACUTE, AND CHRONIC TOXICITY). REVIEWS EXISTING GUIDELINES AND STANDARDS, CURRENT EXPOSURE LEVELS AND SPECIAL RISK GROUPS.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, OPERATIONS DIVISION, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW004631

PUBLICATION DATE: 78

TITLE: CHLORINATED PHENOLS: AMBIENT WATER QUALITY CRITERIA.

DESCRIPTOR: *AMBIENT WATER QUALITY CRITERIA; *CHLORINATED PHENOLS; *ORGANIC CHEMISTRY; *PHENOLS; PUBLIC HEALTH; *TOXICOLOGY; *TOXIC SUBSTANCES; *WATER QUALITY; WATER POLLUTION

DESCRIPTIVE NOTE: 141P.

ABSTRACT: THIS REPORT PRESENTS WATER QUALITY CRITERIA FOR CHLORINATED PHENOLS. IT PRESENTS CONCENTRATION CRITERIA FOR THE PROTECTION OF FRESHWATER AND SALTWATER AQUATIC LIFE. IT ALSO PRESENTS 'SAFE' CONCENTRATIONS FOR HUMANS, AND IN THE CASE OF SUSPECT OR PROVEN CARCINOGENS, GIVES VARIOUS LEVELS OF CANCER RISK.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, OPERATIONS DIVISION, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW004632

PUBLICATION DATE: 78

TITLE: NITROBENZENE: AMBIENT WATER QUALITY CRITERIA.

DESCRIPTOR: *AMBIENT WATER QUALITY CRITERIA; *AQUATIC LIFE; CHEMISTRY; *HUMAN HEALTH; *NITROBENZENE; *REGULATIONS; TOXICOLOGY; *TOXIC SUBSTANCES; *WATER QUALITY

DESCRIPTIVE NOTE: 81P. PRICE: $6.00

ABSTRACT: PRESENTED ARE THE AMBIENT WATER QUALITY CRITERIA FOR NITROBENZENE FOR AQUATIC LIFE AND HUMAN HEALTH, USING AVAILABLE INFORMATION AND CURRENT RESEARCH DATA. EVALUATES ACUTE AND CHRONIC TOXICITY FOR FRESHWATER AND SALTWATER ORGANISMS. ANALYZES HUMAN AND OTHER MAMMALS EXPOSURE TO, INGESTION OF, INHALATION OF, AND DERMAL ABSORPTION OF NITROBENZENE. EXAMINES RESEARCH ON THE CHEMICAL PHARMOKINETICS (ABSORPTION, DISTRIBUTION, METABOLISM, EXCRETION) AND ITS EFFECTS (SYNERGISM, ANTAGONISM, TERATOGENICITY, MUTAGENICITY, CARCINOGENICITY, ACUTE, AND CHRONIC TOXICITY). REVIEWS EXISTING GUIDELINES AND STANDARDS, CURRENT EXPOSURE LEVELS AND SPECIAL RISK GROUPS.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, OPERATIONS DIVISION, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW004633

PUBLICATION DATE: 78

TITLE: ZINC: AMBIENT WATER QUALITY CRITERIA.

DESCRIPTOR: *AMBIENT WATER QUALITY CRITERIA; AQUATIC LIFE; CARCINOGENS; CHEMISTRY; HUMAN HEALTH; *PUBLIC HEALTH; *TOXICOLOGY; *TOXIC SUBSTANCES; *WATER QUALITY; *WATER POLLUTION CONTROL; *ZINC

DESCRIPTIVE NOTE: 149P. PRICE: $7.25

ABSTRACT: THIS REPORT PRESENTS WATER QUALITY CRITERIA FOR ZINC. IT PRESENTS CONCENTRATION CRITERIA FOR THE PROTECTION OF FRESHWATER AND SALTWATER AQUATIC LIFE. IT PRESENTS SAFE CONCENTRATIONS FOR HUMANS, AND IN THE CASE OF SUSPECT OR PROVEN CARCINOGENS, GIVES VARIOUS LEVELS OF INCREMENTAL CANCER RISK.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, OPERATIONS DIVISION, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW004634

PUBLICATION DATE: 78

TITLE: POLYCHLORINATED BIPHENYLS: AMBIENT WATER QUALITY CRITERIA.

DESCRIPTOR: *AMBIENT WATER QUALITY CRITERIA; CHEMISTRY; CARCINOGENICITY; HUMAN HEALTH; MUTAGENICITY; *PCBL'S; *POLYCHLORINATED BIPHENYLS; PUBLIC HEALTH; *REGULATIONS; *TOXICOLOGY; *TOXIC SUBSTANCES; *WATER QUALITY

DESCRIPTIVE NOTE: 183P. PRICE: $9.25

ABSTRACT: PRESENTED ARE THE AMBIENT WATER QUALITY CRITERIA FOR POLYCHLORINATED BIPHENYLS (PCB'S) FOR AQUATIC LIFE AND HUMAN HEALTH, USING AVAILABLE INFORMATION AND CURRENT RESEARCH DATA. EVALUATES ACUTE AND CHRONIC TOXICITY FOR FRESHWATER AND SALTWATER ORGANISMS. ANALYZES HUMAN AND OTHER MAMMALS EXPOSURE TO, INGESTION OF, INHALATION OF, AND DERMAL ABSORPTION OF PCB'S. EXAMINES RESEARCH ON THE CHEMICAL PHARMOKINETICS (ABSORPTION, DISTRIBUTION, METABOLISM, EXCRETION) AND ITS EFFECTS (SYNERGISMS, ANTAGONISM, TERATOGENICITY, MUTAGENICITY, CARCINOGENICITY, ACUTE, AND CHRONIC TOXICITY). REVIEWS EXISTING GUIDELINES AND STANDARDS, CURRENT EXPOSURE LEVELS AND SPECIAL RISK GROUPS.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, OPERATIONS DIVISION, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW004635

PUBLICATION DATE: 78

TITLE: COPPER: AMBIENT WATER QUALITY CRITERIA.

DESCRIPTOR: *AMBIENT WATER QUALITY CRITERIA; AQUATIC LIFE; *COPPER; PUBLIC HEALTH; *REGULATIONS; *STANDARDS; *TOXICOLOGY; *TOXIC SUBSTANCES; *WATER QUALITY

DESCRIPTIVE NOTE: 163P. PRICE: $8.00

ABSTRACT: THIS REPORT PRESENTS WATER QUALITY CRITERIA FOR COPPER. IT PRESENTS CONCENTRATION CRITERIA FOR THE PROTECTION OF FRESHWATER AND SALTWATER AQUATIC LIFE. IT ALSO INCLUDES 'SAFE' CONCENTRATIONS FOR HUMANS.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, OPERATIONS DIVISION, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW004636

PUBLICATION DATE: APR 79

TITLE: A HISTORY OF LAND APPLICATION AS A TREATMENT ALTERNATIVE.

DESCRIPTOR: ECONOMICS; ENGINEERING; EUROPE; LEGAL ISSUES; *LAND APPLICATION; LAND TREATMENT; POLLUTION; PUBLIC HEALTH; *RESEARCH REVIEWS; *SEWAGE; TECHNOLOGY; UNITED STATES; UTILITIES; *WATER POLLUTION CONTROL; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 83P. PRICE: $6.00

ABSTRACT: THIS REVIEW WAS CONDUCTED IN ORDER TO DETERMINE WHETHER THE HISTORY OF LAND TREATMENT COULD ASSIST IN EXPLAINING THE REASONS BEHIND THE APPARENT RELUCTANCE TO USE THIS WASTEWATER TREATMENT OPTION, AND TO PROVIDE A BASIS OF JUDGING ITS FUTURE PROSPECTS. THE MAJOR SHIFTS THAT HAVE OCCURRED THROUGHOUT THE HISTORY OF LAND TREATMENT WERE EXPLAINED BY EXAMINING THE INFLUENCES OF SOCIAL-PUBLIC HEALTH CONCERNS, LEGAL ISSUES AND TECHNOLOGICAL DEVELOPMENTS.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, OPERATIONS DIVISION, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW004638

PUBLICATION DATE: AUG 78

TITLE: EVALUATION OF THE MICROBIOLOGY STANDARDS FOR DRINKING WATER.

PERSONAL AUTHOR: HENDRICKS, CHARLES W., ED.

DESCRIPTOR: *BACTERIA; *COLIFORM BACTERIA; *DRINKING WATER; *DISINFECTION; LEGISLATION; *MICROBIOLOGY; PUBLIC HEALTH; RECYCLING; *REGULATIONS; *STANDARDS; *SAFE DRINKING WATER ACT; SAMPLING; *STANDARD METHODS; *WATER TREATMENT; *WATER QUALITY; *WASTEWATER TREATMENT; WATER RESOURCES

DESCRIPTIVE NOTE: 235P. PRICE: $9.50

ABSTRACT: THE SAFE DRINKING WATER ACT OF 1974 PROVIDES A UNIQUE OPPORTUNITY FOR THE FEDERAL GOVERNMENT TO CONSTRUCTIVELY ADD TO THE TRADITIONAL AND VARIED ROLES OF STATE AND LOCAL GOVERNMENTS IN PROVIDING SAFE DRINKING WATER FOR THE GENERAL PUBLIC. THESE SYMPOSIUM PROCEEDINGS FOCUS ON THE STANDARDS FOR COLIFORM BACTERIA, COLIFORM BACTERIA DETECTION AND CONTROL, COMPLIANCE WITH THE COLIFORM STANDARD, AND ALTERNATIVE MEANS OF DETERMING COMPLIANCE.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, OPERATIONS DIVISION, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW004639

PUBLICATION DATE: JUN 75

TITLE: PROCEEDINGS OF UNIVERSITY SEMINAR ON POLLUTION AND WATER RESOURCES-COLUMBIA UNIVERSITY-VOLUME VI 1972-1975.

PERSONAL AUTHOR: HALASI-KUN, GEORGE J.; WHETSTONE, GEORGE W.

DESCRIPTOR: *CONFERENCE REPORTS; *DECISION MAKING; ECOSYSTEMS; *HYDROLOGY; MODELS; MICROPOLLUTION; NATURAL RESOURCES; *PLANNING; *POLLUTION; PESTICIDES; *RESEARCH; *SURFACE RUNOFF; STREAMS; *SIMULATIONS; *WATER RESOURCES; *WATER QUALITY; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 230P. PRICE: $9.50

ABSTRACT: THE 10 PAPERS PRESENTED IN THESE SEMINAR PROCEEDINGS COVER WATER RESOURCES PLANNING AND PROCESSES. TOPICS INCLUDE BASIC HYDROLOGICAL INVESTIGATIONS, ECOSYSTEM MODELING, MEETING WATER RESOURCES DEMAND, FACTOR ANALYSIS OF WATER QUALITY, MICRO POLLUTION, SIMULATION MODELING, REGIONAL RUNOFF AND SEWAGE TREATMENT.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, OPERATIONS DIVISION, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW004640
PUBLICATION DATE: APR 78

TITLE: PROCEEDINGS OF A SYMPOSIUM ON LAND TREATMENT OF WASTE EFFLUENTS-APRIL 25-26, 1978.

DESCRIPTOR: CHLORINATION; CONSTRUCTION; *DESIGN; *EQUIPMENT; *EFFLUENTS; *FACILITIES; *LAND TREATMENT; *LAND DISPOSAL; *OPERATIONS (WASTEWATER); PUBLIC HEALTH; *RESEARCH REVIEWS; SOIL CHARACTERISTICS; *WASTEWATER; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 143P. PRICE: $7.25

ABSTRACT: INCLUDED ARE 26 PAPERS SUMMARIZING THE STATE-OF-THE-ART RELATED TO THE TREATMENT OF WASTEWATER BY LAND APPLICATION. APPROACHES FOR THE DESIGN OF LAND TREATMENT SYSTEMS ARE EMPASIZED.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, OPERATIONS DIVISION, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW004643

PUBLICATION DATE: MAY 79

TITLE: FULL-SCALE DEMONSTRATION OF OPEN TANK OXYGEN ACTIVATED SLUDGE TREATMENT.

DESCRIPTOR: ACTIVATED SLUDGE; *EQUIPMENT EVALUATION; *FACILITIES; OXYGEN; *OXYGEN ACTIVATED SLUDGE; SEWAGE; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 116P. PRICE: $7.25

ABSTRACT: THIS REPORT PRESENTS AN OPERATING SUMMARY OF A FULL SCALE DEMONSTRATION OF THE OPEN TANK PURE OXYGEN ACTIVATED SLUDGE SYSTEM, CONDUCTED AT THE FACILITIES OF THE METROPOLITAN DENVER SEWAGE DISPOSAL DISTRICT IN DENVER, COLORADO. THE OVERALL PERFORMANCE OF THE SYSTEM WAS DICTATED IN LARGE PART BY THE QUANTITY OF FILAMENTOUS ORGANISMS IN THE ACTIVATED SLUDGE, AND THE INVESTIGATION OF THESE ORGANISMS. ATTEMPTS TO CONTROL OR ELIMINATE THEM WAS A CONTINOUS ACTIVITY DURING MUCH OF THE DEMONSTRATION. THE SYSTEM WAS EVALUATED AS TO OXYGEN TRANSFER EFFICIENCY AND OXYGEN CONSUMPTION. IT WAS ALSO COMPARED TO THE METRO DIFFUSED AIR SYSTEM RUNNING IN PARALLEL WITH THE DEMONSTRATION SYSTEM ON THE BASIS OF SLUDGE PRODUCTION AND POWER REQUIREMENTS.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, OPERATIONS DIVISION, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW004645

PUBLICATION DATE: JUL 79

TITLE: ECONOMICS OF WATER QUALITY IN AGRICULTURE - A LITERATURE REVIEW.

PERSONAL AUTHOR: OGG, CLAYTON W.; AND OTHERS

DESCRIPTOR: *AGRICULTURE; *ECONOMIC ANALYSIS; *EROSION; EXPERSES; *LITERATIVE REVIEWS; *NONPOINT POLLUTION; NUTRIENTS; *PESTICIDES; *POLLUTION; RESEARCH; *RESEARCH REVIEWS; *SEDIMENTATION; *SOIL; *WATER QUALITY; *WATER POLLUTION

DESCRIPTIVE NOTE: 39P. PRICE: $4.50

ABSTRACT: THIS REVIEW DESCRIBES STUDIES IN SERVERAL DISCIPLINES WHICH CONTRIBUTE TO UNDERSTANDING ECONOMIC IMPACTS OF REDUCING NONPOINT POLLUTION. COST STUDIES REVIEWED DEAL WITH CONTROLLING SOIL EROSION, NUTRIENT LOSS, AND PESTICIDE LOSS. OTHER STUDIES REVIEWED SUGGEST WHERE AND HOW EXTENSIVELY CONTROL PRACTICES MAY BE NEEDED. ONE AREA IN NEED OF RESEARCH IS THE RELATIONSHIP BETWEEN EROSION REDUCTION AND THE DELIVERY OF SEDIMENT AND CHEMICALS TO STREAMS. RESEARCH IS ALSO NEEDED ON THE BENEFITS OF POLLUTION REDUCTION.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, OPERATIONS DIVISION, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW004649

PUBLICATION DATE: MAR 79

TITLE: CHEMISTRY LABORATORY MANUAL FOR BOTTOM SEDIMENTS AND ELUTRIATE TESTING.

DESCRIPTOR: *ANALYTICAL TECHNIQUES; BULK SEDIMENTS; *BOTTOM SEDIMENTS; *CHEMISTRY; *CHEMICAL ANALYSIS; CHEMICAL COMPOSITION; *ELUTRIATE TESTING; FIELD SAMPLING; *INSTRUCTIONAL MATERIALS; *LABORATORY PROCEDURES; POLLUTION; PHYSICAL ANALYSIS; *SAMPLING; *SEDIMENTS; SUSPENDED SOLIDS; *WATER QUALITY

DESCRIPTIVE NOTE: 153P. PRICE: $8.00

ABSTRACT: THIS DOCUMENT CONTAINS THE PROCEDURES USED AT THE ENVIRONMENTAL PROTECTION AGENCY, REGION V, CENTRAL REGIONAL LABORATORY FOR THE ANALYSIS OF BULK SEDIMENTS, ELUTRIATES AND OTHER SOLID SAMPLES. THE PROCEDURES REPRESENT INTERIM ONES, BUT PROVIDE SOME INDICATION OF THE GENERAL CHEMICAL COMPOSITION AND POLLUTIONAL NATURE OF SEDIMENTS.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, OPERATIONS DIVISION, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW004650

PUBLICATION DATE: MAR 79

TITLE: PHYSIOLOGICAL EFFECTS OF 2,4-D AND 2,4,5-T ON SELECTED AQUATIC ORGANISMS.

PERSONAL AUTHOR: SIGMON, CATHERINE F.

DESCRIPTOR: *AQUATIC ORGANISMS; BLUEGILL; DAPHORIA; FISH; *HERBICIDES; MORTALITY; *PHYSIOLOGY; *TOXICITY; *TOXIC SUBSTANCES

DESCRIPTIVE NOTE: 22P. PRICE: $4.50

ABSTRACT: THE SUBLETHAL EFFECTS OF 2,4-D AND 2,4,5-T (BUTOXYETHANOL ESTERS) ON SEVERAL AQUATIC ANIMALS WERE EXAMINED. THE HERBICIDE DID NOT SIGNIFICANTLY AFFECT OXYGEN CONSUMPTION IN LEPOMIS MACROCHIRUS (BLUEGILL) EXPOSED TO 3PPM. LITTLE HERBICIDE WAS RETAINED BY FISH WHICH WERE EXPOSED TO 3PPM OF 2,6-D OR 2,4,5-T FOR EIGHT DAYS. DAPHNIA PULEX EXHIBITED GREATER OXYGEN CONSUMPTION WHEN EXPOSED TO 3PPM OF 2,4,5-T AT 30 DEGREES C. OXYGEN CONSUMPTION IN CONTROL AND TREATMENT GROUPS DID NOT DIFFER AT LOWER TEMPERATURES OR FOR 2,4-D EXPOSURE. MORTALITY, PUPATION, AND EMERGENCY WERE EXAMINED FOR CHRONIMUS SP. EXPOSED TO 1 OR 3 PPM OF 2,4-D OR 2,4,5-T. SIGNIFICANTLY GREATER MORTALITY AND LOWER PERCENTAGE PUPATION WERE OBSERVED IN GROUPS EXPOSED TO 3PPM 2,4,5-T AT 30 DEGREES C.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, OPERATIONS DIVISION, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW004653

PUBLICATION DATE: MAY 79

TITLE: PERFORMANCE AND UPGRADING OF WASTEWATER STABILIZATION PONDS.

PERSONAL AUTHOR: MIDDLEBROOKS, E. JOE; AND OTHERS.

DESCRIPTOR: ALGAE; CONSTRUCTION; COSTS; *DESIGN; EFFLUENTS; FILTERS; LAND APPLICATION; *LAGOONS; MAINTENANCE; *OPERATIONS (WASTEWATER); *STABILIZATION PONDS; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 216P. PRICE: $9.50

ABSTRACT: THIS PUBLICATION CONTAINS 18 PAPERS DISCUSSING AND DESCRIBING THE DESIGN, OPERATION, PERFORMANCE, AND UPGRADING OF LAGOON SYSTEMS. PERFORMANCE DATA FOR FACULTATIVE AND AERATED LAGOONS FROM NUMEROUS SITES THROUGHOUT THE USA ARE PRESENTED. DESIGN CRITERIA AND THE APPLICABILITY OF PERFORMANCE DATA TO DESIGN EQUATIONS ARE DISCUSSED. ROCK FILTERS, INTERMITTENT SAND FILTERS, MICRO SCREENING, PHASE ISOLATION, LAND APPLICATION, AND CONTROLLED ENVIRONMENT AQUACULTURE WERE EVALUATED AS METHODS FOR UPGRADING LAGOON EFFLUENTS. THE PROCEEDINGS CONCLUDE WITH A PRESENTATION OF THE COSTS ASSOCIATED WITH THE CONSTRUCTION, OPERATION AND MAINTENANCE OF LAGOON SYSTEMS.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, OPERATIONS DIVISION, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW004658

PUBLICATION DATE: 79

TITLE: GUIDELINES FOR THE SELECTION OF LABORATORY

INSTRUMENTS.

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *DRINKING WATER; *EQUIPMENT; *EQUIPMENT EVALUATION; EQUIPMENT UTILIZATION; *LABORATORY EQUIPMENT; MEASUREMENT; *OPERATIONS (WATER TREATMENT); SAFE DRINKING WATER ACT; *WATER SUPPLY; *WATER ANALYSIS; *WATER QUALITY

DESCRIPTIVE NOTE: 77P. PRICE: $9.50

ABSTRACT: PROVIDED ARE GUIDELINES AND CONSIDERATIONS FOR THE PURCHASE OF LABORATORY EQUIPMENT WHICH MIGHT BE A REQUIREMENT IN ORDER TO OBTAIN COMPLIANCE WITH THE INTERIM PRIMARY DRINKING WATER REGULATIONS OF THE SAFE DRINKING WATER ACT. WHEN MAKING THE SELECTION OF INSTRUMENTS TO BE CONSIDERED, IT WAS RECOGNIZED THAT AS ADDITIONAL STANDARDS ARE DEVELOPED AND IMPOSED, AND/OR METHODOLOGY IS APPROVED, ADDITIONAL INSTRUMENTS MAY BE NEEDED ALTHOUGH AN ATTEMPT WAS MADE TO FORESEE SOME OF THESE REQUIREMENTS AND TO INCLUDE THE APPROPRIATE INSTRUMENTS. FIRST, GENERAL CONSIDERATIONS FOR THE PURCHASE OF LABORATORY EQUIPMENT SUCH AS THE ESTIMATED USAGE OF THE EQUIPMENT, THE POSSIBLE APPLICATIONS OF THE EQUIPMENT, PERFORMANCE STANDARDS, THE NATURE OF REPAIR SERVICE AND OF TECHNICAL SUPPORT, AND THE INSTRUMENT WARRANTY ARE PRESENTED. THEN SPECIFIC CONSIDERATIONS AND GUIDELINES (INCLUDING MANUFACTURERS, MODELS, AND PRICES) FOR SELECTION OF THE FOLLOWING EQUIPMENT ARE PRESENTED: WATER BATHS, INCUBATORS, AUTOCLAVES, OVENS, SPECIFIC ION METERS (PH AND FLUORIDES), CONDUCTIVITY METERS, TURBIMETERS, AMPEROMETRIC TITRATORS FOR RESIDUAL CHLORINE ANALYSIS, MICROSCOPES, ANALYTIC BALANCES, ULTRAVIOLET AND VISIBLE SPECTROPHOTOMETERS, ATOMIC ABSORPTION SPECTROPHOTOMETERS, LABORATORY RECORDERS, LABORATORY INSTRUMENTS FOR MEASURING RADIOACTIVITY IN DRINKING WATER, AND AUTOMATED INSTRUMENTS FOR ANALYSIS OF NITRATES AND FLUORIDES.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION, 6666 WEST QUINCY AVE, DENVER, CO 80235

IRIS ACCESSION NUMBER: EW004660

PUBLICATION DATE: 78

TITLE: ENVIRONMENTAL CHEMISTRY AND CYCLING PROCESSES.

PERSONAL AUTHOR: ADRIANO, D. C.; BRISBIN, I. LEHR, JR.

DESCRIPTOR: *ANALYTICAL TECHNIQUES; AQUATIC BIOLOGY; CHEMICAL ANALYSIS; *CHEMICALS; *CHEMISTRY; *ECOLOGY; *ECOSYSTEMS; ENERGY; *ENVIRONMENT; *ENVIRONMENTAL INFLUENCES; *ENVIRONMENTAL RESEARCH; *INSTRUCTIONAL MATERIALS; MODELS; SAMPLING; *SYMPOSIA

DESCRIPTIVE NOTE: 912P. PRICE: $15.00

ABSTRACT: PRESENTED ARE 61 PAPERS FROM A SYMPOSIUM SPONSORED JOINTLY BY THE SAVANNAH RIVER ECOLOGY LABORATORY; INSTITUTE OF ECOLOGY, UNIVERSITY OF GEORGIA; AND THE DIVISION OF BIOMEDICAL AND ENVIRONMENTAL RESEARCH, ENERGY RESEARCH AND DEVELOPMENT ADMINISTRATION WHICH WAS HELD IN AUGUSTA, GEORGIA, APRIL 28-30, 1976. THE PURPOSE OF THE CONFERENCE WAS TO SEARCH OUT AND IDENTIFY BASIC PARADIGMS IN THE AREA OF ENVIRONMENTAL CHEMISTRY AND CYCLING STUDIES PARTICULARLY RELATING TO ENVIRONMENTAL IMPACTS OF ENERGY PRODUCTION AND UTILIZATION. AMONG THE MORE GENERAL TOPICS DISCUSSED BY THE ARTICLES ON VERY SPECIFIC TOPICS ARE THE FOLLOWING: (1) DESIGN, SAMPLING, AND MODELING, (2) ANALYTIC TECHNIQUES, (3) SOILS AND SEDIMENTS, (4) PLANT AND ANIMAL UPTAKE, AND (5) TERRESTRIAL AND AQUATIC ECOSYSTEMS. AN ABSTRACT IS PRESENTED WITH EACH ARTICLE.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, OPERATIONS DIVISION, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW004674

PUBLICATION DATE: 79

TITLE: HAZARDOUS CHEMICAL SPILL CLEANUP.

PERSONAL AUTHOR: ROBINSON, J. S.

DESCRIPTOR: AIR POLLUTION CONTROL; *CHEMICALS; FEDERAL WATER POLLUTION CONTROL ACT; *HAZARDOUS MATERIALS; *INSTRUCTIONAL MATERIALS; LANDFILLS; *SPILLS; *TOXIC SUBSTANCES; *WATER POLLUTION CONTROL

DESCRIPTIVE NOTE: 406P. PRICE: $48.00

ABSTRACT: THIS BOOK IS INTENDED TO SERVE AS A PRACTICAL GUIDE AND MANUAL FOR THE HANDLING AND CONTROL OF HAZARDOUS MATERIAL SPILLS. SPILL CONTROL AND CLEANUP METHODS ARE EMPHASIZED. THE INTRODUCTORY OVERVIEW DEALS WITH THE PRESENT LEGISLATIVE ASPECTS OF THIS PROBLEM, WHILE THE FIVE CHAPTERS THAT FOLLOW GIVE PRACTICAL ADVICE AND RESPONSE TECHNIQUES FOR INDIVIDUAL TYPES OF MATERIALS. THIS INCLUDES THE PREFERRED METHOD OF DISPOSAL FOR THE RECOVERED SUBSTANCES, AND SPILL DAMAGE RESTORATION.

AVAILABILITY: NOYES DATA CORP., NOYES BLDGS., PARK RIDGE, NJ 07656

IRIS ACCESSION NUMBER: EW004675

PUBLICATION DATE: 78

TITLE: DRINKING WATER DETOXIFICATION.

PERSONAL AUTHOR: GILLIES, M. T.

DESCRIPTOR: ACTIVATED CARBON; CARCINOGENS; *CHLORINATION; *DETOXIFICATION; *DRINKING WATER; *FILTRATION; *INSTRUCTIONAL MATERIALS; *OPERATIONS (WATER TREATMENT); *SAFE DRINKING WATER ACT; *TOXIC SUBSTANCES; *WATER TREATMENT; *WATER SUPPLY; *WATER; WATER QUALITY

DESCRIPTIVE NOTE: 348P. PRICE: $30.00

ABSTRACT: THIS BOOK REVIEWS THE METHODS USED TO REMOVE TOXIC CHEMICALS FROM DRINKING WATER INCLUDING TOXIC SUBSTANCES FORMED BY CHLORINATION. IT ALSO CONCERNS ITSELF WITH NEW AND PROPOSED AMENDMENTS TO THE SAFE DRINKING WATER

ACT OF 1974 AND THEREWITH PRESENTS A COMPREHENSIVE EXPOSITION OF THE WHOLE DRINKING WATER TOPIC. AT ISSUE IS THE ENVIRONMENTAL PROTECTION AGENCY'S (EPA) CONTROVERSIAL PLAN TO REQUIRE WATER WORKS SERVING MORE THAN 75,000 PERSONS TO FILTER THEIR WATER THROUGH BEDS OF GRANULAR ACTIVATED CARBON IN ORDER TO REMOVE TRACES OF CHEMICALS SUSPECTED OF CAUSING CANCER. MOST SUSPECT ARE THE TRIHALOMETHANES SUCH AS CHLOROFORM, WHICH ARE FORMED FROM TRACES OF NATURAL AND WASTE ORGANIC MATTERS WHENEVER WATER IS CHLORINATED. ALSO IMPLICATED ARE MANY OTHER ORGANIC CHEMICALS THAT ENTER WATER SUPPLIES AS A RESULT OF INDUSTRIAL ACTIVITY, AND FROM MUNICIPAL AND AGRICULTURAL RUNOFFS.

AVAILABILITY: NOYES DATA CORP., PARK RIDGE, NJ 07656

IRIS ACCESSION NUMBER: EW004677

PUBLICATION DATE: FEB 80

TITLE: TOXIC--THE TREND OF THE FUTURE.

PERSONAL AUTHOR: FOESS, G. W.; ERICSON, W. A.

DESCRIPTOR: *FEDERAL LEGISLATION; *HEAVY METALS; POLLUTION CONTROL; *REGULATIONS; *REQUIREMENTS; SLUDGE; *TOXIC SUBSTANCES; *WASTEWATER TREATMENT; WATER QUALITY

DESCRIPTIVE NOTE: 21-24, 27P.

ABSTRACT: THIS ARTICLE EXAMINES RECENT LEGISLATION WHICH CONTROLS THE AMOUNT OF HEAVY METALS IN MUNICIPAL WASTEWATER. REGULATORY REQUIREMENTS INCLUDING INDUSTRIAL PRETREATMENT REGULATIONS, WATER QUALITY STANDARDS, SLUDGE DISPOSAL CRITERIA AND AIR QUALITY CRITERIA ARE DISCUSSED. INVESTIGATIONS OF THE PERFORMANCE AND REMOVAL MECHANISM OF UNIT PROCESSES WITH RESPECT TO TOXINS HAVE BEEN PERFORMED AND THE RESULTS PRESENTED FOR PRIMARY SEDIMENTATION, ACTIVATED SLUDGE, CHEMICAL OXIDATION, CHEMICAL PRECIPITATION AND COAGULATION, FILTRATION, ACTIVATED CARBON ADSORPTION, CHELATION, ION EXCHANGE, REVERSE OSMOSIS, INCINERATION, AND WET-AIR OXIDATION. A DETAILED TABLE SUMMARIZES THE WATER QUALITY CRITERIA FOR 65 TOXIC SUBSTANCES THAT HAVE BEEN ISSUED FOR THE PROTECTION OF FRESH WATER AQUATIC LIFE.

AVAILABILITY: WATER AND WASTES ENGINEERING; V17 N2

IRIS ACCESSION NUMBER: EW004678

PUBLICATION DATE: FEB 80

TITLE: SODIUM BICARBONATE BRINGS DIGESTER BACK TO HEALTH.

DESCRIPTOR: *CASE STUDIES; COST EFFECTIVENESS; *DIGESTERS; *MAINTENANCE; *OPERATIONS (WASTEWATER); *SODIUM BICARBONATE; SOUTH CAROLINA; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 27P.

ABSTRACT: WHEN THE ROCKY RIVER WASTEWATER TREATMENT FACILITY IN ANDERSON, SC, SUCCUMBED TO DIGESTER PROBLEMS IN 1978, SODIUM BICARBONATE WAS CALLED TO THE RESCUE. THE PLANT SUFFERED FROM A 70 DEGREES PRIMARY DIGESTER OPERATING TEMPERATURE, A PH OF 5.4 AND MINIMAL METHANE PRODUCTION. A SODIUM BICARBONATE SHOCK AND SUBSEQUENT TREATMENT RETURNED THE SYSTEM TO PEAK PERFORMANCE WITHIN SIX MONTHS. THE SODIUM BICARBONATE PAID FOR ITSELF IN FUEL SAVINGS, AND ELIMINATED THE COSTLY PROCESS OF CLEANING AND RESTARTING THE DIGESTOR.

AVAILABILITY: WATER AND WASTES ENGINEERING; V17 N2

IRIS ACCESSION NUMBER: EW004679

PUBLICATION DATE: FEB 80

TITLE: PREVENT GROUNDWATER CONTAIMINATION BEFORE IT'S TOO LATE.

PERSONAL AUTHOR: WEIMAR, ROBERT A.

DESCRIPTOR: CARCINOGENS; *CASE STUDIES; CHEMICAL ANALYSIS; *CONTAMINATION; *GROUNDWATER; LANDFILLS; MASSACHUSETTS; *ORGANIC CHEMICALS; *POLLUTION CONTROL; *RECLAIMATION; SEPTIC SYSTEMS; *WATER QUALITY; *WATER RESOURCES; *WATER SUPPLY; *WATERWELLS

DESCRIPTIVE NOTE: 30-33, 63P.

ABSTRACT: THE IMPORTANCE OF GROUNDWATER RESOURCES AND THE INCREASING RATE OF GROUNDWATER CONTAMINATION IS DISCUSSED IN THIS ARTICLE. SOURCES OF POLLUTANTS AND ANALYSIS OF THE CONTAMINANTS ILLUSTRATE THE SEVERITTY OF THE PROBLEM WITH RESPECT TO TREATMENT. GROUNDWATER CONTAMINATION IN MASSACHUSETTS IS EXAMINED. SUGGESTIONS FOR RECLAMATION OF ORGANIC CHEMICAL CONTAMINATED WELLS ARE PROVIDED.

AVAILABILITY: WATER AND WASTES ENGINEERING; V17 N2

IRIS ACCESSION NUMBER: EW004680

PUBLICATION DATE: FEB 80

TITLE: EXTRACT HEAVY METALS VIA LIQUID-ION EXCHANGE.

PERSONAL AUTHOR: CORNWELL, DAVID A.; WESTERHOFF, GARRET P.

DESCRIPTOR: *HEAVY METALS; LABORATORY TESTS; LAND APPLICATION; *LIQUID-ION EXCHANGE; *METALS; RESEARCH; *SLUDGE; SOLVENT EXTRACTIONS; *SOLVENTS; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 36-38, 42P.

ABSTRACT: THE ELIMINATION OF HEAVY METALS FROM WASTEWATER SLUDGE IS A PROBLEM THAT CAN BE SOLVED WITH THE USE OF A LIQUID-ION EXCHANGE PROCESS. PRELIMINARY LABORATORY TESTS WERE CONDUCTED ON EXTRACTING HEAVY METALS FROM FIVE WASTEWATER SLUDGE SAMPLES. THE TESTS INDICATE THAT AN ACCEPTABLE SOLVENT COMBINATION TO ACCOMPLISH HEAVY METAL REMOVAL FROM PRIMARY, SECONDARY, AND PHYSICAL/CHEMICAL SLUDGES CAN BE FOUND.

AVAILABILITY: WATER AND WASTES ENGINEERING; V17 N2

IRIS ACCESSION NUMBER: EW004681

PUBLICATION DATE: FEB 80

TITLE: ECONOMICALLY REMOVE TOXICS.

PERSONAL AUTHOR: NALL, ARTHUR E.

DESCRIPTOR: *CHEMICAL OXIDATION TECHNIQUE; COSTS; *COST EFFECTIVENESS; *DISINFECTION; EFFLUENTS; *OZONE; POLLUTION CONTROL; RESEARCH; *ULTRAVIOLET; *WASTEWATER TREATMENT; WATER QUALITY

DESCRIPTIVE NOTE: 43, 48, 52-53P.

ABSTRACT: THIS ARTICLE CONCLUDES THAT OZONE-UV IS MUCH MORE EFFECTIVE FOR DISINFECTION THAN OZONE OR UV TAKEN INDIVIDUALLY, AND THE AMOUNT OF OZONE REQUIRED IS ONLY 20 TO 50 PERCENT OF THE USUAL OZONE DOSAGE. OZONE-UV DISINFECTION RATE IS SEVERAL ORDERS OF MAGNITUDE FASTER THAN THE ORGANIC OXIDATION RATE; CONSEQUENTLY THE DISINFECTION IS NOT APPRECIABLY AFFECTED BY THE PRESENCE OF OXIDIZABLE ORGANIC SPECIES. OZONE-UV IS A CLEAN PROCESS; ALL PROCESS ELEMENTS ARE INSITU. NO CHEMICALS HAVE TO BE SHIPPED, SUPPLIED OR PREPARED. THE STUDY ALSO FOUND THAT THE OZONE-UV METHOD IS MORE ECONOMICAL THAN OTHER PROCESSES FOR DISINFECTION. FIGURES, TABLES, AND MATHEMATICAL MODELS ILLUSTRATE VARIOUS RESEARCH COMPONENTS.

AVAILABILITY: WATER AND WASTES ENGINEERING; V17 N2

IRIS ACCESSION NUMBER: EW004682

PUBLICATION DATE: MAR 80

TITLE: PRODUCTS AT WORK.

DESCRIPTOR: COLORIMETER; CONDUCTIVITY METER; *EQUIPMENT; *EQUIPMENT EVALUATION; FLOWMETER; METERS; OZONE MONITOR; *PRODUCT REVIEW; PUMPS; TECHNOLOGICAL ADVANCEMENT; *WASTEWATER TREATMENT; *WATER TREATMENT

DESCRIPTIVE NOTE: 16-24P.

ABSTRACT: THIS ARTICLE REVIEWS CURRENT TECHNOLOGICAL ADVANCES IN EQUIPMENT FOR WATER TREATMENT. PRODUCT REVIEWS INCLUDE: (1)AUTOMATIC COLORIMETER PROVED FOR WATER/WASTEWATER ANALYSIS, (2)SUBMERSIBLE PUMPING SYSTEM DESIGNED FOR USE IN CLASS I, DIVISION I, GROUP D, HAZARDOUS LOCATIONS, (3)AVAILABILITY OF A MAGNETIC FLOWMETER, (4) CONDUCTIVITY METER FEATURING GAS-PLATED ELECTRODES, (5)HIGH-PRESSURE DIAPHRAGM PUMP AVAILABLE FOR HIGH-VOLUME APPLICATIONS, (6)ULTRA SONIC METER TO SELECTIVELY DETECT FLOW, (7)COMPUTER CONTROLLED OZONE MONITOR WITH A DIGITAL READOUT, (8)ORGANIC-FREE WATER FOR TOTAL ORGANIC CARBON (TOC) AND TRIHALOMETHANE (THM) ANALYSES, (9)LABORATORY LABELING SYSTEM THAT REMAINS READABLE EVEN WHEN WET, (10)VACUUM PUMP GEARBOX DESIGNED FOR INDUSTRIAL VACUUM LOADER, AND (11)A WATER TESTING KIT LINE.

AVAILABILITY: WATER AND SEWAGE WORKS; V127 N3

IRIS ACCESSION NUMBER: EW004683

PUBLICATION DATE: MAR 80

TITLE: LAND TREATMENT USES SLUDGE AT MADISON, WISCONSIN.

PERSONAL AUTHOR: CUNNINGHAM, JAMES; AND OTHERS

DESCRIPTOR: *AGRICULTURE; *EQUIPMENT; *FARMING; *LAND APPLICATION; *LAND USE; MUNICIPAL WASTES; *OPERATIONS (WASTEWATER); *ORGANIC FERTILIZER; *SLUDGE DISPOSAL; *SLUDGE; *WASTE DISPOSAL; WISCONSIN

DESCRIPTIVE NOTE: 28-29, 49P.

ABSTRACT: REPORTED IS AN APPROACH TO MUNICIPAL SEWAGE SLUDGE DISPOSAL THAT WINS ACTIVE FARMER COOPERATION, STIMULATES CROP GROWTH, PROTECTS THE ENVIRONMENT, AND SHARPLY REDUCES DISPOSAL COSTS. FOLLOWING A STABILITY PROBLEM AT AN EXISTING SLUDGE STORAGE LAGOON, THE MADISON, WISCONSIN, METROPOLITAN SEWAGE DISTRICT BEGAN SPREADING SLUDGE ON NEARBY FARMS. FARMERS NOTED THE BENEFITS IN IMPROVED SOIL STRUCTURE, HIGHER CROP YIELDS, AND LESS EROSION OF TOPSOIL FROM KNOLLS. THIS CASE STUDY EXAMINES THE OPERATIONS AND EQUIPMENT USED IN THIS PROGRAM.

AVAILABILITY: WATER AND SEWAGE WORKS; V127 N3

IRIS ACCESSION NUMBER: EW004684

PUBLICATION DATE: MAR 80

TITLE: WATER/WASTEWATER PROCESS CONTROL INSTRUMENTATION--AN OVERVIEW.

PERSONAL AUTHOR: BABCOCK, RUSSELL

DESCRIPTOR: *CONTROL DEVICES; DESIGN; *EQUIPMENT REVIEW; *EQUIPMENT; *INSTRUMENTATION; MANAGEMENT; MARKETING; OPERATIONS (WATER); OPERATIONS (WASTEWATER); *TECHNOLOGICAL ADVANCEMENTS; *WATER TREATMENT; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 30-31P.

ABSTRACT: THE STATE-OF-THE-ART IN THE WATER/WASTEWATER INSTRUMENT FIELD, REGARDING DESIGN, OPERATION, AND MARKETING DECISIONS FOR MANAGEMENT AND SUPERVISORY PERSONNEL, IS REVIEWED IN THIS FIRST OF A SERIES OF ARTICLES.

AVAILABILITY: WATER AND SEWAGE WORKS; V127 N3

IRIS ACCESSION NUMBER: EW004685

PUBLICATION DATE: MAR 80

TITLE: MINIMIZING PRESTRESSED CONCRETE TANK MAINTENANCE. PART 3.

PERSONAL AUTHOR: CROWLEY, FRANCIS X.

DESCRIPTOR: *CONCRETE TANKS; *COVER COATS; *EQUIPMENT; *MAINTENANCE; *PRESTRESSED CONCRETE; REPAIRS; SHOTCRETE; *TANKS; *WATER STORAGE; *WATER SUPPLY

DESCRIPTIVE NOTE: 34-35, 49P.

ABSTRACT: THIS IS THE THIRD INSTALLMENT IN A SERIES OF ARTICLES DISCUSSING PREVENTATIVE MAINTENANCE TECHNIQUES FOR MINIMIZING PROBLEMS WITH PRESTRESSED CONCRETE TANKS. THIS PART EXAMINES COVER COATS AND SUGGESTS THAT PROBLEM APPEARANCES CAN BE MINIMIZED AND WHEN THEY OCCUR, THEY CAN BE REPAIRED, OFTEN AT A REASONABLE COST. THE PROCESS OF APPLYING SHOTCRETE COVER COATS IS PRESENTED.

AVAILABILITY: WATER AND SEWAGE WORKS; V127 N3

IRIS ACCESSION NUMBER: EW004686

PUBLICATION DATE: MAR 80

TITLE: SEPTIC SYSTEMS CAN BE VIABLE, LOW-COST ALTERNATIVES.

PERSONAL AUTHOR: ESCHWEGE, HENRY

DESCRIPTOR: *CASE STUDIES; *COST EFFECTIVENESS; DESIGN; *EQUIPMENT EVALUATION; *EQUIPMENT; *FACILITIES; *MAINTENANCE; *SEPTIC SYSTEMS; SITE EVALUATION; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 40, 50-51P.

ABSTRACT: EXAMINED ARE SEPTIC SYSTEMS AS AN ALTERNATIVE TO SEWERS AND CENTRAL TREATMENT FACILITIES. CASE STUDIES HAVE SHOWN THAT SUCH ALTERNATE SYSTEMS CAN (1) PROVIDE AS GOOD OR BETTER TREATMENT THAN CENTRAL SYSTEMS, (2) USE LESS ENERGY, AND (3) REPLENISH GROUNDWATERS. IN ADDITION TO EXAMINING CASE STUDIES, SITING AND DESIGN PROBLEMS, SEPTIC SYSTEM FAILURES, OPERATION AND MAINTENANCE PROBLEMS, COST EFFECTIVENESS, AND COMMUNITY EXPERIENCES ARE CONSIDERED.

AVAILABILITY: WATER AND SEWAGE WORKS; V127 N3

IRIS ACCESSION NUMBER: EW004687

PUBLICATION DATE: MAR 80

TITLE: NEW FACILITIES SERVE DUAL COMMUNITY ROLE.

PERSONAL AUTHOR: DUNBAR, GARY A.; SLOAN, DAVID S.

DESCRIPTOR: *CASE STUDIES; *COOPERATIVE PLANNING; *DESIGN; *FACILITIES; *INSERVICE EDUCATION; *INSTRUCTION; *LEARNING FACILITIES; *MASSACHUSETTS; *POSTSECONDARY EDUCATION; *SECONDARY TREATMENT; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: P16-19P.

ABSTRACT: DESCRIBES A WASTEWATER SECONDARY TREATMENT PLANT IN AMHERST, MASSACHUSETTS, THAT WAS DESIGNED TO ALSO SERVE AS A TEACHING AND LEARNING ADJUNCT TO THE UNIVERSITY OF MASSACHUSETTS. DESCRIBES THE DESIGN OF THE PLANT THAT FACILITATES STUDENT AND VISITOR COMPREHENSION OF THE PROCESS FLOW.

AVAILABILITY: WATER AND WASTES ENGINEERING; V17 N3

IRIS ACCESSION NUMBER: EW004688

PUBLICATION DATE: MAR 80

TITLE: DENVER TRAINS SEWAGE CONTROL STAFF IN COMPUTERIZED SYSTEM.

PERSONAL AUTHOR: NELSON, JOHN K.; MISHRA, BIPIN B.

DESCRIPTOR: *CASE STUDIES; *COLORADO; *COMPUTER APPLICATIONS; *DIGITAL COMPUTERS; EQUIPMENT; *INSTRUMENTATION; *OPERATIONS (WASTEWATER); *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: P21-22P.

ABSTRACT: DESCRIBES THE OPERATION OF A DIRECT DIGITAL CONTROL SYSTEM FOR WASTEWATER TREATMENT IN DENVER, COLORADO. THE INSTRUMENTATION, CONTROL PACKAGE, AND OPERATOR POSITIONS ARE DESCRIBED. REAL BENEFITS OF THE COMPUTERIZED SYSTEM ARE DISCUSSED.

AVAILABILITY: WATER AND WASTES ENGINEERING; V17 N3

IRIS ACCESSION NUMBER: EW004689

PUBLICATION DATE: MAR 80

TITLE: COMPUTERIZING BREAKDOWNS MAY IMPROVE WASTEWATER TREATMENT EQUIPMENT.

PERSONAL AUTHOR: LUBERTKIN, S. A.

DESCRIPTOR: *COMPUTER APPLICATIONS; EQUIPMENT; EQUIPMENT STANDARDS; EQUIPMENT MANUFACTURERS; *EQUIPMENT EVALUATION; *MAINTENANCE; *OPERATIONS (WASTEWATER); *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: P26-27P.

ABSTRACT: ADVOCATES DATA STORAGE BY A COMPUTER OF MACHINE BREAKDOWNS, WHICH WOULD INCLUDE THE FOLLOWING INFORMATION: MANUFACTURER, EQUIPMENT NAME AND MODEL, ANY AND ALL COMPLAINTS PECEIVED. THE EPA WOULD THEN MAKE THIS INFORMATION AVAILABLE TO ENGINEERS AND MANUFACTURERS TO

ASSURE PROPER SELECTION OF QUALITY EQUIPMENT.
AVAILABILITY: WATER AND WASTES ENGINEERING; V17 N3

IRIS ACCESSION NUMBER: EW004690

PUBLICATION DATE: MAR 80

TITLE: OUTFALL SYSTEMS CAN ACHIEVE SAFE EFFLUENT LEVELS.

PERSONAL AUTHOR: SORRELL, F. Y.

DESCRIPTOR: *DIFFUSERS; *DESIGN; EFFLUENTS; HYDRAULICS; MEASUREMENT; *MIXERS; MAINTENANCE; *OUTFALLS; *OPERATIONS (WASTEWATER); *WASTE DISPOSAL; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: P30-31P.

ABSTRACT: OUTLINES METHODS BY WHICH THE DESIGN ENGINEER CAN ASSURE DESIRED EFFLUENT LEVELS BY ANALYZING THE INTERNAL DIFFUSER FLOW AND MODIFYING THE LAYOUT OF THE OUTFALL SYSTEM. DISCUSSES THE MULTI-PORT DIFFUSER, EXAMINATION OF INTERNAL FLOW, SPECIFIC FEATURES OF A TYPICAL DIFFUSER, AND ASPECTS OF EFFLUENT VELOCITY.

AVAILABILITY: WATER AND WASTES ENGINEERING; V17 N3

IRIS ACCESSION NUMBER: EW004691

PUBLICATION DATE: MAR 80

TITLE: POLYMERS PEAK AT PRECISE DOSAGE.

PERSONAL AUTHOR: LECEY, ROBERT W.

DESCRIPTOR: *FLOCS; FLOCCULATION; *POLYMERS; *PROCESS CONTROL; *SLUDGE DEWATERING; SLUDGE HAUDLING; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: P39-41, 43-44P.

ABSTRACT: OUTLINES PROCEDURES THAT OPTIMIZES POLYMER CONDITIONING REQUIREMENTS FOR CENTRIFUGAL SLUDGE DEWATERING APPLICATIONS.

AVAILABILITY: WATER AND WASTES ENGINEERING; V17 N3

IRIS ACCESSION NUMBER: EW004704

PUBLICATION DATE: FEB 80

TITLE: DESIGNING FOR COARSE SAND FILTRATION SYSTEMS.

PERSONAL AUTHOR: WALTERS, J. G.

DESCRIPTOR: BACKWASH; *DESIGN; *EQUIPMENT; *FACILITIES; *FILTERS; *FILTRATION; *SAND FILTRATION SYSTEMS; *WASTEWATER TREATMENT; WEIR DESIGN

DESCRIPTIVE NOTE: 28P.

ABSTRACT: THIS THIRD AND FINAL ARTICLE IN THIS SERIES CONTINUES WITH BACKWASH CONSIDERATIONS WHEN DESIGNING FOR COARSE SAND FILTRATION SYSTEMS. TWO FIGURES ACCOMPANY DISCUSSION ON OPERATIONS, EQUIPMENT, MEDIA LOSS, AND PILOT PLANT STUDIES.

AVAILABILITY: WATER AND SEWAGE WORKS; V127 N2

IRIS ACCESSION NUMBER: EW004705

PUBLICATION DATE: FEB 80

TITLE: PERCEPTION INFLUENCES WATER CONSERVATION SUCCESS.

PERSONAL AUTHOR: BRUVOLD, WILLIAM H.

DESCRIPTOR: *ATTITUDES; *CALIFORNIA; *CONSERVATION; *CONSUMER PERCEPTIONS; *DROUGHT; *RESEARCH; *RESIDENTIAL WATER USE; *WATER RATES; *WATER CONSERVATION; *WATER SUPPLY

DESCRIPTIVE NOTE: 34-368 58P.

ABSTRACT: THIS ARTICLE REPORTS ON A DETAILED STUDY OF CONSUMER'S PERCEPTION OF WATER SUPPLY AND WATER CONSERVATION FOLLOWING THE CALIFORNIA DROUGHT OF 1975-1977. NINE WATER SERVICE DISTRICTS WERE SELECTED FOR A MAJOR RESIDENTIAL SURVEY, WHICH SHOWED THAT THE RESIDENTIAL DEMAND FOR WATER IS PRICE ELASTIC. RESULTS ALSO SHOWED THAT THERE CAN BE STRINGENT RESIDENTIAL WATER CONSERVATION PROGRAMS THAT CONSUMERS JUDGE BOTH EQUITABLE AND EFFECTIVE. AN IN-DEPTH EXAMINATION OF CONSUMER'S ATTITUDES, PERCEPTIONS, AND ACTIONS ARE INCLUDED WITH RESULTS ILLUSTRATED IN FOUR TABLES. THE AUTHOR ALSO INCLUDES A SECTION ON THE RESEARCH METHODS EMPLOYED.

AVAILABILITY: WATER AND SEWAGE WORKS; V127 N2

IRIS ACCESSION NUMBER: EW004706

PUBLICATION DATE: FEB 80

TITLE: MINIMIZING PRESTRESSED CONCRETE TANK MAINTENANCE. PART 2.

PERSONAL AUTHOR: CROWLEY, FRANCIS X.

DESCRIPTOR: *CONCRETE TANKS; *CONSTRUCTION (PROCESS); CORE WALLS; *DESIGN; DESIGN PROBLEMS; *MAINTENANCE; *PRESTRESSED CONCRETE STRUCTURES; *TANKS

DESCRIPTIVE NOTE: 46, 58P.

ABSTRACT: PART TWO OF AN ARTICLE CONSIDERS THE PERFORMANCE OF CIRCULAR PRESTRESSED CONCRETE TANKS AND EXPLORES SOME WAYS IN WHICH CORE WALLS AND ROOFS CAN BE BUILT TO PERFORM WITH A MINIMUM OF MAINTENANCE. THIS ARTICLE DISCUSSES SIX MAJOR PROBLEMS IN DESIGNING AND BUILDING CIRCULAR PRESTRESSED CONCRETE STRUCTURES THAT CAN ARISE FROM THE CORE

WALL AND THE ROOF.
AVAILABILITY: WATER AND SEWAGE WORKS; V127 N2

IRIS ACCESSION NUMBER: EW004707

PUBLICATION DATE: FEB 80

TITLE: CESSPOOL SLUDGE UNDERGOES TREATABILITY STUDY.

PERSONAL AUTHOR: RATASUK, SERMPOL; KLINSUKONTH, CHALYUDTH

DESCRIPTOR: CASE STUDIES; *CESSPOOLS; *COAGULATION; CHEMICAL ANALYSIS; FACILITIES; LAGOONS; *SLUDGE; *THAILAND; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 48-49, 57P.

ABSTRACT: THE PRACTICE OF CESSPOOL SLUDGE LAGOONING WAS FOUND TO BE NEITHER ECONOMICALLY OR ENVIRONMENTALLY ACCEPTABLE FOR BANGKOK, SO IN ORDER TO GAIN ADDITIONAL INFORMATION ON TREATMENT OF CESSPOOL SLUDGE, THIS STUDY WAS INITIATED TO CHARACTERIZE THE CESSPOOL SLUDGE AND TO INVESTIGATE ITS TREATABILITY. SECTIONS INCLUDED ARE: CHARACTERISTICS OF CESSPOOL SLUDGE, TREATMENT BY CHEMICAL COAGULATION, AND CHEMICALLY-COAGULATED SUPERNATANT. FIGURES ILLUSTRATE A TYPICAL CESSPOOL SYSTEM IN BANGKOK, PROCESS OF TREATMENT OF CESSPOOL SLUDGE, COMPARISONS OF BANGKOK CESSPOOL SLUDGE WITH NIGHTSOIL IN JAPAN AND DIGESTER SUPERNATANT FROM U.S. SEWAGE TREATMENT PLANTS, AND CHEMICAL COAGULATIONS OF CESSPOOL SLUDGE.

AVAILABILITY: WATER AND SEWAGE WORKS; V127 N2

IRIS ACCESSION NUMBER: EW004708

PUBLICATION DATE: FEB 80

TITLE: REDESIGN CONTROLS MANHOLD LEAKAGE.

PERSONAL AUTHOR: SHEPPARD, WALTER LEE

DESCRIPTOR: *CONSTRUCTION; *DESIGN; *DESIGN NEEDS; EQUIPMENT EVALUATION; LEAKAGE; MAINTENANCE; *MANHOLES; *PIPES; QUALITY CONTROL; *SEWERS; *WASTEWATER COLLECTION

DESCRIPTIVE NOTE: 50-52P.

ABSTRACT: THIS ARTICLE DISCUSSES THE WEAKNESSES OF THE MOST COMMON DESIGNS USED FOR MANHOLE CONSTRUCTION, THE SEWER CONNECTIONS MADE FROM THEM, AND THE REDESIGN NECESSARY TO CORRECT THESE WEAKNESSES. A CRITICAL ANALYSIS OF DESIGN FOR VARIOUS MANHOLES IS PRESENTED ALONG WITH RECOMMENDATIONS FOR CONSTRUCTION AND MATERIAL SELECTION.

AVAILABILITY: WATER AND SEWAGE WORKS; V127 N2

IRIS ACCESSION NUMBER: EW004709
PUBLICATION DATE: JAN 80

TITLE: EFFECTS OF WATER CONSERVATION ON SANITARY SEWERS AND WASTEWATER TREATMENT PLANTS.

PERSONAL AUTHOR: DEZELLAR, JEFFREY T.; MAIER, WALTER J.

DESCRIPTOR: *CONSERVATION; ECONOMICS; *FACILITIES; PLANNING; URBAN AREAS; UTILITIES; *WATER RESOURCES; *WASTE DISPOSAL; *WASTEWATER TREATMENT; *WASTEWATER COLLECTION

DESCRIPTIVE NOTE: 76-88P.

ABSTRACT: DISCUSSED ARE THE EFFECTS OF REDUCED WATER USAGE ON WASTEWATER COLLECTION AND TREATMENT FACILITIES IN TERMS OF WASTEWATER COMPOSITION, PERFORMANCE OF COLLECTION AND TREATMENT FACILITIES, AND TREATED EFFLUENT WATER QUALITY CHARACTERSTICS.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL; V52 N1

IRIS ACCESSION NUMBER: EW004710

PUBLICATION DATE: JAN 80

TITLE: FACULTATIVE WASTE STABILIZATION POND DESIGN.

PERSONAL AUTHOR: FINNEY, BRAD A.; MIDDLEBROOKS, E. JOE

DESCRIPTOR: *DESIGN; ENGINEERING; *EVALUATION; *LAGOONS; *UTILITIES; WATER RESOURCES; *WASTE DISPOSAL; *WASTEWATER TREATMENT; *WASTE STABILIZATION LAGOONS

DESCRIPTIVE NOTE: 134-147P.

ABSTRACT: THIS STUDY OUTLINES THE PERFORMANCE OF EXISTING LAGOON SYSTEMS AND EVALUATES SEVERAL FACULTATIVE WASTE STABILIZATION POND DESIGN EQUATIONS. RESULTS INDICATE THAT NONE OF THE THREE TYPES OF MODELS ANALYZED WERE ADEQUATE.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL; V52 N1

IRIS ACCESSION NUMBER: EW004711

PUBLICATION DATE: JAN 80

TITLE: SYNTHESIS OF WASTE TREATMENT SYSTEMS BY IMPLICIT ENUMERATION.

PERSONAL AUTHOR: ROSSMAN, LEWIS A.

DESCRIPTOR: *COMPUTER MODELS; *ENGINEERING; *FACILITIES; *OPTIMIZATION MODELS; *OPERATIONS (WASTEWATER); *UTILITIES; *WASTEWATER TREATMENT; *WASTE DISPOSAL; WASTES

DESCRIPTIVE NOTE: 148-160P.

ABSTRACT: EXISTING OPTIMIZATION MODELS FOR WASTE TREATMENT

SYSTEMS ARE EITHER LIMITED TO ONLY THE WASTEWATER TREATMENT SUBSYSTEM OR REQUIRE THAT THE SYSTEM STRUCTURE (THAT IS, CHOICE AND ARRANGEMENT OF PROCESS UNITS) BE FIXED IN ADVANCE. DESCRIBES DEVELOPMENT OF AN IMPLICIT ENUMERATION APPROACH TO SYSTEM SYNTHESIS THAT OVERCOMES THESE RESTRICTIONS.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL; V52 N1

IRIS ACCESSION NUMBER: EW004712

PUBLICATION DATE: JAN 80

TITLE: COMPOSTING AND DISPOSAL OF INDUSTRIAL WASTEWATER SLUDGE.

PERSONAL AUTHOR: NESE, PETER A.; AND OTHERS

DESCRIPTOR: *COMPOSTING; *ENVIRONMENT; *ECONOMICS; *INDUSTRIAL WASTES; LAND USE; *METALS; *MANAGEMENT; *SLUDGE; *WASTEWATER TREATMENT; *WASTE DISPOSAL; WASTES

DESCRIPTIVE NOTE: 183-191P.

ABSTRACT: DESCRIBES EVALUATION OF SLUDGE DISPOSAL MANAGEMENT ALTERNATIVES. COMPOSTING WAS FOUND TO HAVE THE LOWEST CAPITAL AND OPERATING COSTS. BUT ATTEMPTS TO TURN SLUDGE TO BENEFICIAL USE REVEALED POTENTIAL PROBLEMS, LARGELY DUE TO INDUSTRY'S HEAVY METAL CONTAMINATION. THEREFORE, PRETREATMENT OF INDUSTRIAL WASTES IN NECESSARY BEFORE COMPOSTING.
AVAILABILITY: JOURNAL WATER POLLUTION CONTROL; V52 N1

IRIS ACCESSION NUMBER: EW004713

PUBLICATION DATE: FEB 80

TITLE: EQUITY AND ECONOMICS IN SETTING WATER RATES FOR APARTMENT COMPLEXES.

PERSONAL AUTHOR: MANN, PATRICK C.

DESCRIPTOR: *APARTMENTS; *ECONOMICS; LEGISLATION; *RATES; *UTILITIES; *WATER RATES; *WATER SUPPLY

DESCRIPTIVE NOTE: 74-77P.

ABSTRACT: THE EQUITY OF MULTIPLE MINIMUM BILLING FOR APARTMENT COMPLEXES IS EXAMINED IN TERMS OF ITS EFFECT ON THE WATER UTILITY, THE APARTMENT OWNER, AND THE APARTMENT TENANTS, AS WELL AS IN RELATION TO THE RATES ASSESSED RESIDENTIAL AND COMMERCIAL CUSTOMER CLASSES GENERALLY.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL; V72 N2

IRIS ACCESSION NUMBER: EW004714

PUBLICATION DATE: FEB 80

TITLE: GROUNDING OF ELECTRIC CIRCUITS TO WATER SERVICES: NATIONAL ELECTRCAL CODE VS AWWA POLICY.

PERSONAL AUTHOR: STEFFAN, ROBERT F.

DESCRIPTOR: *CORROSION; *ELECTRIC CIRCUITS; *ELECTRICAL GROUNDING; *PIPES; *PLUMBING; *UTILITIES; *WATER SUPPLY; *WATER RESOURCES

DESCRIPTIVE NOTE: 78-81P.

ABSTRACT: FOR MORE THAN 65 YEARS THE SUBJECT OF ELECTRICAL GROUNDING TO WATER PIPES HAS BEEN DISPUTED BY THE PROMULGATORS OF THE NATIONAL ELECTRICAL CODE AND THE AMERICAN WATER WORKS ASSOCIATION (AWWA). THE EVALUATION OF THE CODE AND AWWA POLICY STATEMENTS REGARDING IT ARE SUMMARIZED.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL; V72 N2

IRIS ACCESSION NUMBER: EW004715

PUBLICATION DATE: FEB 80

TITLE: GROUNDING OF ELECTRIC CIRCUITS TO WATER SERVICES: ONE UTILITIES EXPERIENCE.
PERSONAL AUTHOR: GUERRERA, AUGUST A.

DESCRIPTOR: *CORROSION; *ELECTRIC CIRCUITS; *ELECTRICAL GROUNDING; *PIPES; PLUMBING; REGULATIONS; *UTILITIES; *WATER RESOURCES; WATER POLLUTION CONTROL; *WATER QUALITY

DESCRIPTIVE NOTE: 82-87P.

ABSTRACT: THE SEPARATION OF PROTECTIVE GROUNDING ELECTRODES FROM WATER PIPING WOULD PROTECT THE INTEGRITY OF THE WATER SUPPLIES PIPING SYSTEM AND THE QUALITY OF THE WATER. IT WOULD ALSO MINIMIZE HAZARDS TO WATER SUPPLY PERSONNEL.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL; V72 N2

IRIS ACCESSION NUMBER: EW004716

PUBLICATION DATE: FEB 80

TITLE: CONDUCTING A REGULAR MAIN FLUSHING PROGRAM.

PERSONAL AUTHOR: PATTISON, PHILIP L.

DESCRIPTOR: *MAINS; *MAINTENANCE; *PIPES; *UTILITIES; *WATER QUALITY; *WATER RESOURCES; *WATER MAINS

DESCRIPTIVE NOTE: 88-90P.

ABSTRACT: AS STANDARDS FOR WATER QUALITY IMPROVE, THE PUBLIC DEMANDS HIGHER QUALITY WATER AND BETTER SERVICE. ANNUAL MAIN FLUSHING SHOULD BE A PART OF EVERY UTILITIES REGULAR MAINTENANCE PROGRAM TO ENSURE THAT WATER QUALITY DOES NOT DIMINISH AFTER WATER FLOWS FROM THE SOURCE OF SUPPLY INTO THE PIPE NETWORK.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL; V72 N2

IRIS ACCESSION NUMBER: EW004717

PUBLICATION DATE: FEB 80

TITLE: THE BEHAVIOR OF ASBESTOS-CEMENT PIPE UNDER VARIOUS WATER QUALITY CONDITIONS: A PROGRESS REPORT.

PERSONAL AUTHOR: BUELOW, RALPH W.; AND OTHERS

DESCRIPTOR: *ASBESTOS-CEMENT PIPE; CORROSION; *FIELD TEST; *PIPES; PUBLIC HEALTH; *POTABLE WATER; *UTILITIES; *WATER RESOURCES; *WATER SUPPLY; WATER QUALITY

DESCRIPTIVE NOTE: 91-102P.

ABSTRACT: ASBESTOS-CEMENT PIPE HAS HAD A REPUTATION FOR RESISTING ATTACK BY AGGRESSIVE WATERS THAT CAUSE CORROSION OF METAL PIPE MATERIALS. THE RESULTS OF THIS STUDY SUGGEST THAT ASBESTOS-CEMENT PIPE BEHAVES MUCH LIKE OTHER PIPING MATERIALS, EXCEPT PVC, THAT ARE COMMONLY USED FOR POTABLE WATER DISTRIBUTION.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL; V72 N2

IRIS ACCESSION NUMBER: EW004718

PUBLICATION DATE: FEB 80

TITLE: DUAL DISTRIBUTION SYSTEMS ANALYSIS.

PERSONAL AUTHOR: BED, ARUN K.; EVANS, MICHAEL P.

DESCRIPTOR: *ECONOMICS; *MODELS; *MANAGEMENT SYSTEMS; *SYSTEMS ANALYSIS; *UTILITIES; URBAN AREAS; *WATER RESOURCES; *WATER SUPPLY; *WATER DISTRIBUTION

DESCRIPTIVE NOTE: 103-108P.

ABSTRACT: DESCRIBED IS A SYSTEM MODEL FOR TECHNICAL AND ECONOMIC ANALYSIS OF AN URBAN WATER SYSTEM HAVING POTABLE, SUBPOTABLE, AND NONPOTABLE SOURCES AND DUAL OR MULTIPLE DISTRIBUTION SYSTEMS.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL; V72 N2

IRIS ACCESSION NUMBER: EW004719

PUBLICATION DATE: FEB 80

TITLE: MEASURING THE VELOCITY OF WATER IN A PADDLED FLOCCULATOR.

PERSONAL AUTHOR: BHOLE, ANAND G.

DESCRIPTOR: *FLOCCULATION; *HYDRAULICS; *INSTRUMENTATION; *MEASUREMENT; *VELOCITY; *WATER SUPPLY; *WATER RESOURCES; *WATER DISTRIBUTION

DESCRIPTIVE NOTE: 109-115P.

ABSTRACT: DESCRIBED IS AN APPARATUS FOR MEASURING THE VELOCITY OF WATER THAT IS SIMPLE TO GENERATE, ABLE TO MEASURE THE TANGENTIAL VELOCITY, SUFFICIENTLY ACCURATE TO MEASURE SMALL FLUCTUATIONS IN VELOCITY, SMALL ENOUGH TO HAVE NO SIGNIFICANT EFFECT IN THE FLOW PATTERN, AND LOW IN COST.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL; V72 N2

IRIS ACCESSION NUMBER: EW004720

PUBLICATION DATE: FEB 80

TITLE: DISPOSAL AND HANDLING OF WATER TREATMENT PLANT SLUDGE.

PERSONAL AUTHOR: REH, CARL W.

DESCRIPTOR: LEGISLATION; *OPERATIONS (WATER); *SLUDGE; *SLUDGE DISPOSAL; TECHNOLOGY; *UTILITIES; *WATER TREATMENT; *WATER RESOURCES; *WASTES; *WASTE DISPOSAL; WATER POLLUTION CONTROL

DESCRIPTIVE NOTE: 115-118P.

ABSTRACT: THE IMPETUS PROVIDED BY THE WATER POLLUTION CONTROL ACT, COUPLED WITH THE NEW REQUIREMENTS OF SAFE DRINKING WATER ACT, HAS SPURRED THE DEVELOPMENT AND IMPLEMENTATION OF NEW TECHNOLOGIES FOR SLUDGE DISPOSAL.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL; V72 N2

IRIS ACCESSION NUMBER: EW004721

PUBLICATION DATE: FEB 80

TITLE: THE RATHATION METHOD FOR SOLVING FOR FLUID FLOW.

PERSONAL AUTHOR: HANSEN, A. J.; CRABTREE, B. W.

DESCRIPTOR: *COMPUTER PROGRAMS; ENGINEERING; *FLUID MECHANICS; *FLUID FLOW; *RATHATION METHOD; UTILITIES; *WATER SUPPLY; *WATER RESOURCES; *WATER DISTRIBUTION

COMPREHENSIVE BIBLIOGRAPHY.
AVAILABILITY: CENTER FOR PROFESSIONAL ADVANCEMENT, P. O. BOX 994, EAST BRUNSWICK, NJ 08816

IRIS ACCESSION NUMBER: EW004746

PUBLICATION DATE: MAR 80

TITLE: STORMWATER DETENTION BASIN SIZING.

PERSONAL AUTHOR: BURTON, KIT R.

DESCRIPTOR: COLLECTION SYSTEMS; *DETENTION BASINS; FLOOD CONTROL; MATHEMATICAL APPLICATIONS; *MATHEMATICAL MODELS; *RUNOFF WATERS; *STORM RUNOFF; STORMWATER; *WATER COLLECTION; WATER STORAGE

DESCRIPTIVE NOTE: 437-439P.

ABSTRACT: THIS PAPER PRESENTS A SIMPLE METHOD FOR ESTIMATING THE REQUIRED SIZE OF A STORMWATER DETENTION BASIN. A FIVE STEP EQUATION EXAMINES THE RELATIONSHIP BETWEEN STORMWATER DETENTION BASIN SIZE AND OUTFLOW CAPACITY.

AVAILABILITY: JOURNAL OF THE HYDRAULICS DIVISION; V106 N3

IRIS ACCESSION NUMBER: EW004751

PUBLICATION DATE: FEB 80

TITLE: OPERATOR TRAINING: PRINCIPLES AND CASE STUDY.

PERSONAL AUTHOR: SHERRARD, JOSEPH; KERRI, KENNETH D.

DESCRIPTOR: EFFICIENCY; *JOB TRAINING; JOB SATISFACTION; MUNICIPALITIES; *OPERATOR TRAINING; SAFETY; *TRAINING; *WASTEWATER TREATMENT; WASTE DISPOSAL; WAGES

DESCRIPTIVE NOTE: 236-240P.

ABSTRACT: VERY LITTLE ATTENTION HAS BEEN GIVEN TO OPERATOR WELFARE, WHICH CONSEQUENTLY HAS SUFFERED. IF THE PROBLEM OF UNSATISFACTORY WAGES, DEPLORABLE SAFETY AND MORALE PROBLEMS CAN BE RULED OUT AS THE BASIS FOR POOR OPERATOR PERFORMANCE, (AND HENCE, POOR TREATMENT EFFICIENCY) THEN THE NEED FOR TRAINING IS A NECESSITY.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION; V52 N2

IRIS ACCESSION NUMBER: EW004752

PUBLICATION DATE: FEB 80

TITLE: START-UP PROBLEMS AT A PLANT TREATING FOOD-PROCESSING WASTEWATER.

PERSONAL AUTHOR: STOVER, ENOS L.

DESCRIPTOR: *ACTIVATED SLUDGE; EFFLUENT; *FACILITIES; *FOOD PROCESSING; *INDUSTRIAL WASTES; *MONITORING; *OPERATING ENGINEERING; WASTEWATER TREATMENT; *WASTE DISPOSAL; WASTES

DESCRIPTIVE NOTE: 249-256P.

ABSTRACT: DESCRIBED ARE OPERATIONAL PROBLEMS ASSOCIATED WITH THE START-UP OF AN INDUSTRIAL WASTEWATER PRETREATMENT PLANT TREATING A HIGHLY VARIABLE CARBOHYDRATE WASTEWATER BY THE COMPLETE-MIX ACTIVATED SLUDGE PROCESS. SUCCESSFUL START-UP OF THIS BIOLOGICAL FACILITY REQUIRES A MONITORING PROGRAM AND UNDERSTANDING OF THE PROCESSES AND EQUIPMENT CAPABILITIES.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION; V52 N2

IRIS ACCESSION NUMBER: EW004753

PUBLICATION DATE: FEB 80

TITLE: ROTATING DISC BIOLOGICAL TREATMENT OF ACID MINE DRAINAGE.

PERSONAL AUTHOR: OLEM, HARVEY; UNZ, RICHARD F.

DESCRIPTOR: *DESIGN; *INDUSTRIAL WASTES; *MICROBIOLOGY; *BIOLOGICAL TREATMENT; *MINE DRAINAGE; *WASTE DISPOSAL

DESCRIPTIVE NOTE: 257-269P.

ABSTRACT: PAPER DESCRIBES A STUDY TO DETERMINE IF SPECIFIC NATURALLY OCCURING BACTERIA IN ACID MINE DRAINAGE WOULD EFFECTIVELY AND EFFICIENTLY OXIDIZE FERROUS IONS. A PROTOTYPE ROTATING BIOLOGICAL CONTRACTOR UNIT WAS EVALUATED UNDER A VARIETY OF CONDITIONS SIMULATING ACTUAL TREATMENT OF DRAINAGE WASTES.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION; V52 N2

IRIS ACCESSION NUMBER: EW004754

PUBLICATION DATE: FEB 80

TITLE: CARBON ABSORPTION ENHANCEMENT WITH OZONE.

PERSONAL AUTHOR: CULP, RUSSELL, HANSEN, SIGURD P.

DESCRIPTOR: *CHEMICAL REACTIONS; MICROBIOLOGY; *OZONE; *CARBON ABSORPTION; OXIDATION; *PILOT PROJECTS; RECYCLING; UTILITIES; WASTE DISPOSAL; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 270-281P.

ABSTRACT: PAPER DESCRIBES A STUDY TO INVESTIGATE WHETHER OZONE APPLICATION BEFORE CARBON ABSORPTION WOULD MEET CHEMICAL OXYGEN DEMAND REQUIREMENTS OF 20MG/L IN RECLAIMED

WASTEWATER AT SOUTH TAHOE PUBLIC UTILITY DISTRICT. RESULTS INDICATED THAT OZONE PRETREATMENT WAS NOT COST-EFFECTIVE IN COMPARISON WITH ALTERNATIVES UNDER CONDITIONS AT SOUTH TAHOE.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION; V52 N2

IRIS ACCESSION NUMBER: EW004755

PUBLICATION DATE: FEB 80

TITLE: TRACE METALS AND ANAEROBIC DIGESTION OF LEACHATE.

PERSONAL AUTHOR: CAMERON, ROBERT D.; KOCH, FREDERIC A.

DESCRIPTOR: *MUNICIPALITIES; *MICROBIOLOGY; *METALS; *POLLUTION; *RESEARCH; SLUDGE; TRACE METALS; *ANAEROBIC DIGESTION; LANDFILL; LEACHATES; *WASTE DISPOSAL

DESCRIPTIVE NOTE: 282-292P.

ABSTRACT: PAPER DESCRIBES INVESTIGATION OF ANAEROBIC DIGESTION OF LEACHATES. PRELIMINARY DATA REGARDING THE DISTRIBUTION OF TRACE METALS IN THE PROCESS WAS EMPHASIZED. RESULTS INDICATED THE TREATMENT METHOD WAS AN EFFECTIVE MEANS OF BIOSTABILIZATION. HEAVY METALS DID NOT AFFECT THE DIGESTION PROCESS AND TRACE METALS WERE ASSOCIATED WITH THE SLUDGE SOLIDS.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION; V52 N2

IRIS ACCESSION NUMBER: EW004756

PUBLICATION DATE: FEB 80

TITLE: LEAD REMOVAL WITH ABSORBING COLLOID FLOTATION.

PERSONAL AUTHOR: THACKSTON, EDWARD L.; AND OTHERS

DESCRIPTOR: ECONOMICS; HEAVY METALS; *INDUSTRIAL WASTES; *LEAD; *METALS; *PILOT PROJECTS; WASTE DISPOSAL; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 317-328P.

ABSTRACT: INVESTIGATED WAS THE PROBLEM OF REMOVING LEAD FROM INDUSTRIAL WASTES BY THE PROCESS OF ABSORBING COLLOID FOAM FLOTATION. A PILOT PLANT WAS CONSTRUCTED FOR CARRYING OUT THE PROCESS. RESEARCH CONCLUDES THAT THIS METHOD HAS DISTINCTIVE ADVANTAGES OVER SOME OF THE PROCESSES CURRENTLY USED. FURTHER TESTING AND DEVELOPEMENT IS REQUIRED.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION; V52 N2

IRIS ACCESSION NUMBER: EW004757

PUBLICATION DATE: FEB 80

TITLE: MINIMIZING SLUDGE HANDLING AND ENERGY REQUIREMENTS FOR ADVANCED WASTEWATER TREATMENT.

PERSONAL AUTHOR: TURNIPSEED, G. BEN; AND OTHERS

DESCRIPTOR: *ECONOMICS; *ENERGY; *ADVANCED WASTEWATER TREATMENT; *PILOT PROJECTS; RESOURCE ALLOCATION; *SLUDGE; *SOLIDS TREATMENT; UTILITIES; *WASTEWATER TREATMENT; *WASTE DISPOSAL

DESCRIPTIVE NOTE: 364-371P.

ABSTRACT: DESCRIBES EVALUATION OF ALTERNATIVES FOR WET TREATMENT PROCESS AND SOLIDS TREATMENT/DISPOSAL. ECONOMICS, IMPLEMENTATION, RELIABILITY, FLEXIBILITY, AND ENERGY AND RESOURCE USE WERE ANALYZED DURING PROCESS SELECTION. THE CHOSEN SYSTEMS WERE TESTED IN PILOT PLANTS, AND THE RESULTS USED TO DESIGN A TECHNOLOGICALLY EFFICIENT, ENERGY CONSERVING POLLUTION CONTROL PLANT.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION; V52 N2

IRIS ACCESSION NUMBER: EW004758

PUBLICATION DATE: FEB 80

TITLE: USE OF EQUIVALENT BOD AS A NEW WASTE MANAGEMENT TOOL.

PERSONAL AUTHOR: GOLDSMITH, HAROLD I.; WATSON, KENNETH S.

DESCRIPTOR: *ANALYTICAL TECHNIQUES; CHEMICAL ANALYSIS; *COMPUTERS; *EQUIVALENT BIOCHEMICAL OXYGEN DEMAND; *INDUSTRIAL WASTES; *MANAGEMENT; *SAMPLING; *WASTE DISPOSAL; WASTEWATER; WATER RESOURCES

DESCRIPTIVE NOTE: 372-380P.

ABSTRACT: DESCRIBES THE STATE OF THE ART AND PROBLEMS THAT MOTIVATED THE DEVELOPMENT OF THE EQUIVALENT BIOCHEMICAL OXYGEN DEMAND CONCEPT AND THE RESULTANT EQUATION. IT STRESSES THE NEED FOR GOOD WASTEWATER SAMPLING AND ANALYSIS, CRITICAL ANALYSIS OF MANUFACTURING OPERATIONS, EASE OF CALCULATIONS AND UTILITY OF THE COMPUTER.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION; V52 N2

IRIS ACCESSION NUMBER: EW004759

PUBLICATION DATE: FEB 80

TITLE: DIGITAL ON-LINE CLOSED-LOOP CONTROL FOR WASTEWATER TREATMENT OPERATION.

PERSONAL AUTHOR: NELSON, JOHN K.; MISHRA, BIPIN B.

DESCRIPTOR: *ANALOG COMPUTERS; *CLOSED LOOP CONTROL; *INSTRUMENTATION; MANAGEMENT; *OPERATIONS (WASTEWATER); *UTILITIES; *WASTE DISPOSAL; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 406-415P.

ABSTRACT: DISCUSSES OPERATING EXPERIENCES IN THE DENVER SEWAGE DISPOSAL DISTRICT OF A DIRECT DIGITAL CONTROL SYSTEM AS THEY RELATE TO THE FOLLOWING AREAS: CONTROL SYSTEM DESIGN AND APPLICATION; SYSTEM PERFORMANCE; IN HOUSE STAFFING TO SUPPORT THE CONTROL SYSTEM OPERATION; AND IMPACT OF THE SYSTEM ON WASTEWATER TREATMENT PROCESS CONTROL.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION; V52 N2

IRIS ACCESSION NUMBER: EW004777

PUBLICATION DATE: 79

TITLE: MICROORGANISMS FOR WASTE TREATMENT.

PERSONAL AUTHOR: GASNER, LARRY L.

DESCRIPTOR: BACTERIOLOGY; *BIOLOGICAL CONTROL; EFFLUENTS; INDUSTRIAL WASTES; *MICROBIOLOGY; *MICROORGANISMS; *ORGANISMS; SEWAGE; TECHNOLOGY; *WASTE TREATMENT; *WASTEWATER TREATMENT;

DESCRIPTIVE NOTE: 18P. FREE OF CHARGE

ABSTRACT: THIS PAPER WAS PREPARED AS A CHAPTER IN A BOOK OF MICROBIAL TECHNOLOGY. THIS CHAPTER IS LIMITED TO THE TECHNOLOGY OF ISOLATION, PRODUCTION, AND APPLICATION OF THOSE MICROBIAL CULTURES WHICH ARE COMMERCIALLY AVAILABLE OR IMMINENT AS INOCULA FOR THE TREATMENT OF WASTES

AVAILABILITY: FLOW LABORATORIES, INC., 1601 ORANGEWOOD, ORANGE, CA 92668

IRIS ACCESSION NUMBER: EW004792

PUBLICATION DATE: 75

TITLE: SOLID WASTE MANAGEMENT TECHNOLOGY ASSESSMENT.

DESCRIPTOR: *COMPOSTING; ECONOMICS; *EQUIPMENT; *FACILITIES; *INCINERATION; *LANDFILLS; MANAGEMENT; *PYROLYSIS; POLLUTION; *RESOURCE RECOVERY; *SOLID WASTES; *TECHNOLOGY; *WASTE DISPOSAL

DESCRIPTIVE NOTE: 350P. PRICE: $26.50

ABSTRACT: THIS BOOK CONTAINS A THOROUGH ANALYSIS OF ALL OF THE METHODS FOR PROCESSING AND DISPOSING OF SOLID WASTE CURRENTLY IN USE OR BEING CONSIDERED. IT INCLUDES NOT ONLY THE CONVENTIONAL DISPOSAL PROCESSES, SUCH AS LANDFILL, COMPOSTING, AND INCINERATION, BUT ALSO THE NEWER RESOURCE RECOVERY TECHNOLOGIES, SUCH AS PYROLYSIS, WHICH ARE NOW EMERGING FROM THE LABORATORY. IN ADDITION TO ANALYSIS OF COMPLETE PROCESSES, DISCUSSIONS PERTAINING TO THE MERITS OF KEY PIECES OF EQUIPMENT, SUCH AS SHREDDERS, AIR SEPARATORS AND CONVEYERS, ARE ALSO INCLUDED. THE ANALYSIS INCLUDES A DESCRIPTION OF THE TECHNICAL FEATURES OF OPERATION HISTORY AND EXPERIENCE TO DATE, AND ESTIMATES OF BOTH CAPITAL AND OPERATING COSTS AS WELL AS SCALE-UP CONSIDERATIONS. NUMEROUS TABLES ARE PROVIDED THAT ALLOW EASY COMPARISION OF COMPETING PROCESSES IN TERMS OF NET ENERGY RECOVERED, EFFLUENTS, AND THE WEIGHT OF MATERIALS TO BE LANDFILLED.

AVAILABILITY: GENERAL ELECTRIC COMPANY, BUSINESS GROWTH SERVICES, 120 ERIE BLVD., SCHENECTADY, NY 12305

IRIS ACCESSION NUMBER: EW004841

PUBLICATION DATE: JAN 80

TITLE: THE CONSULTANT'S VIEWPOINT ON ALTERNATIVE DISINFECTANTS.

PERSONAL AUTHOR: TITTLEBAUM, M. L.; AND OTHERS

DESCRIPTOR: CHLORINE; *DECISION MAKING; *DISINFECTION; *ENVIRONMENTAL EFFECTS; MODELS; *OPERATIONS (WASTEWATER); *PLANNING; *WATER QUALITY; *WASTEWATER TREATMENT

ABSTRACT: PRESENTS A DECISION-MAKING MODEL FOR THE ENGINEERING CONSULTANT IN ASSESSING DISINFECTANT USE. LISTS CONSIDERATIONS IN DECIDING WHETHER CHLORINE OR ALTERNATIVE DISINFECTANTS SHOULD BE USED IN WASTEWATER TREATMENT SYSTEMS. PRESENTS A DECISION TREE PLANNING APPROACH TO DISINFECTION.

AVAILABILITY: PUBLIC WORKS; V111 N1

IRIS ACCESSION NUMBER: EW004842

PUBLICATION DATE: APR 80

TITLE: HOW TO COPE WITH THE SDWA/I.

PERSONAL AUTHOR: MACLEMAN, EVERETT L.

DESCRIPTOR: *BACTERIA; DRINKING WATER; *LABORATORY PROCEDURES; *RECORD KEEPING; *SAFE DRINKING WATER ACT; SAMPLING; *TURBIDITY; *WATER SUPPLY

DESCRIPTIVE NOTE: 18-22P.

ABSTRACT: PRESENTS EXAMPLES OF AND EXPLAINS SIMPLIFIED FORMS FOR RECORDING TURBIDITY AND BACTERIOLOGICAL DATA USING THE MULTIPLE TUBE PROCEDURE.

AVAILABILITY: WATER AND WASTES ENGINEERING; V17 N4

IRIS ACCESSION NUMBER: EW004843

PUBLICATION DATE: APR 80

TITLE: USE RENEWABLE ENERGY IN WASTEWATER TREATMENT.

PERSONAL AUTHOR: WANN, DAVID

DESCRIPTOR: *DESIGN; ENERGY; *ENERGY CONSERVATION; *FACILITIES; *FUELS; OPERATIONS (WASTEWATER); SOLAR ENERGY; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 36-37P.

ABSTRACT: DISCUSSES THE RENEWABLE ENERGY RESOURCES OF BIOMASS, HEAT, AND HYDROELECTRIC POTENTIAL PRESENT WITHIN THE WASTEWATER STREAM. OUTLINES WAYS IN WHICH INNOVATIONS IN CONSERVATION (SUCH AS MOTOR EFFICIENCY AND WASTE HEAT) AND SOLAR ENERGY CAN BE USED TO PRODUCE AN ENERGY SELF-SUFFICIENT TREATMENT PLANT.

AVAILABILITY: WATER AND WASTE ENGINEERING; V17 N4

IRIS ACCESSION NUMBER: EW004847

PUBLICATION DATE: APR 80

TITLE: PRODUCTS AT WORK.

DESCRIPTOR: CASE STUDIES; *DESIGN; *EQUIPMENT; *FACILITIES; *INNOVATION; *OXIDATION DITCHES; *SCHOOL FACILITIES; VIRGINIA; *WASTEWATER TREATMENT; WASTE DISPOSAL

DESCRIPTIVE NOTE: 27P.

ABSTRACT: DESCRIBES AN ECONOMICAL DESIGN FOR TREATMENT OF DOMESTIC WASTES AT WOODBERRY FOREST SCHOOL, ORANGE, VIRGINIA. A BARRIER BUILT ACROSS THE DRAFT TUBE CHANNEL DISTINGUISHES THE WOODBERRY INSTALLATION FROM CONVENTIONAL OXIDATION DITCHES. LIGHTMIN DAT AERATORS POWER THE CIRCULATING FLUID THROUGH DRAFT TUBES UNDER THE BARRIER.

AVAILABILITY: WATER AND SEWAGE WORKS; V127 N4

IRIS ACCESSION NUMBER: EW004848

PUBLICATION DATE: APR 80

TITLE: OZONE GIVES BOOST TO ACTIVATED CARBON.

PERSONAL AUTHOR: RICE, RIP G.

DESCRIPTOR: *ACTIVATED CARBON; BACTERIA; *BIOLOGICAL ACTION; *CHEMICAL TREATMENT; DESIGN; *DRINKING WATER; *OPERATIONS (WATER); *OZONE; *WATER SUPPLY; *WATER TREATMENT

DESCRIPTIVE NOTE: 78-82P.

ABSTRACT: LISTS AND DISCUSSES ADVANTAGES IN DRINKING-WATER TREATMENT PLANTS OF PREOZONATION FOLLOWED BY ACTIVATED CARBON ADSORPTION, PARTICULARLY IN TERMS OF ACCELERATING BIOLOGICAL ACTION. PROVIDES DIAGRAMS OF THE BIOLOGICAL ACITIVATED CARBON PROCESS AND A DETAILED SCHEMATIC OF THE BIOLOGICAL ACTIVATED CARBON SUBSYSTEM. REVIEWS DESIGN CRITERIA AND ESTIMATED COSTS.

AVAILABILITY: WATER AND SEWAGE WORKS; V127 N4

IRIS ACCESSION NUMBER: EW004849

PUBLICATION DATE: APR 80

TITLE: TESTING POINTS: THE WAY TO PROPER ORGANICS' TREATMENT.

PERSONAL AUTHOR: IWUGO, K. O.

DESCRIPTOR: *AEROBIC TREATMENT; *BIODEGRADATION; EFFLUENTS; *ORGANIC COMPOUNDS; *OPERATIONS (WASTEWATER); *TERTIARY TREATMENT; WATER SUPPLY; *WASTEWATER TREATMENT; *ZAMBIA

DESCRIPTIVE NOTE: 42-43, 72P.

ABSTRACT: CITES RESULTS OF STUDIES FROM THREE MAJOR SEWAGE TREATMENT WORKS IN ZAMBIA. DATA FOR BATCH AEROBIC OXIDATION EXPERIMENTAL STUDIES AND WASTEWATER STUDIES AND BIODEGRADATION PATTERNS OF PURE SUBSTANCES, SYNTHETIC SEWAGE, AND SETTLED MUNICIPAL SEWAGE INDICATE THAT TERTIARY TREATMENT SHOULD FACILITATE THE FURTHER BIODEGRADATION OF RESIDUAL SOLUBLE ORGANICS IN BIOLOGICAL EFFLUENTS.

AVAILABILITY: WATER AND SEWAGE WORKS; V127 N4

IRIS ACCESSION NUMBER: EW004850

PUBLICATION DATE: APR 80

TITLE: CHEMICALS DISINFECT SLUDGE.

PERSONAL AUTHOR: RAMIREZ, ALEJANDRO; MALINA, JOSEPH F.

DESCRIPTOR: ANALYTICAL TECHNIQUES; AMMONIUM HYDROXIDE; *BACTERIAL SURVIVAL; CALCIUM HYDROXIDE; CHLORINE; *DISINFECTION; EXPERIMENTS; *LAND APPLICATION; LIME; *OPERATIONS (WASTEWATER); OZONE; PH; PRIMARY TREATMENT; *SLUDGE; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 52-54P.

ABSTRACT: DISCUSSES RESULTS OF EXPERIMENTS THAT TEST OZONE, CHLORIDE, CALCIUM HYDROXIDE, AND AMMONIUM HYDROXIDE AS DISINFECTANTS OF WASTEWATER SLUDGES INTENDED FOR LAND APPLICATION. GRAPHS SUPPLY INFORMATION REGARDING BACTERIAL SURVIVAL AFTER CHLORINATION, AFTER CHLORINATION AND HOMOGENIZATION, WHEN PH IS VARIED, AND AFTER APPLICATION OF LIME AND AMMONIA.

AVAILABILITY: WATER AND SEWAGE WORKS; V127 N4

IRIS ACCESSION NUMBER: EW004851

PUBLICATION DATE: APR 80

TITLE: AIRLESS DIGESTION AIRED.

PERSONAL AUTHOR: PRICE, ELIZABETH C.; CHEREMISINOFF, PAUL N.

DESCRIPTOR: *ANAEROBIC DIGESTION; BIOCHEMISTRY; *DESIGN; ENERGY; FUEL SHORTAGES; *OPERATIONS (WASTEWATER); *PROCESS CONTROL; *SLUDGE; WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 66, 68P.

ABSTRACT: DISCUSSES ANAEROBIC DIGESTION OF SLUDGE IN TERMS OF FUEL SHORTAGES AND ESCALATING ENERGY COSTS. REVIEWS THE BIOCHEMICAL BASIS OF BIOGAS PRODUCTION; OPTIMUM CONDITIONS OF TEMPERATURE, PH, MOISTURE, PHYSICAL CHARACTERISTICS OF SUBSTRATES, PRESENCE OF NUTRIENTS (NITROGEN, PHOSPHORUS, SULFUR, CARBON), AND CATION CONCENTRATION. ALSO DISCUSSES THE FOUR CURRENT DESIGNS OF SLUDGE DIGESTERS.

AVAILABILITY: WATER AND SEWAGE WORKS; V127 N4

IRIS ACCESSION NUMBER: EW004852

PUBLICATION DATE: APR 80

TITLE: RELIABILITY AND REDUNDANCY: DUAL PROTECTION FOR WATER TREATMENT PLANTS.

PERSONAL AUTHOR: HAMANN, CARL L., SUHR, GENE L.

DESCRIPTOR: *DRINKING WATER; *DESIGN; EQUIPMENT FAILURE; *FACILITIES; MAINTENANCE; PLANT FAILURE; *RELIABILITY; *REDUNDANCY; *WATER TREATMENT

DESCRIPTIVE NOTE: 182-186P.

ABSTRACT: THE DESIGN OF WATER TREATMENT FACILITIES SHOULD BE BASED ON THE PREMISE THAT FAILURE OF ANY SINGLE PLANT COMPONENT WILL NOT PREVENT THE PLANT FROM OPERATING AT THE DESIGN FLOW AND MEETING DRINKING WATER STANDARDS. FURTHERMORE, SUFFICIENT OPERATIONAL FLEXIBILITY SHOULD BE INCLUDED IN THE DESIGN TO HANDLE A VARIETY OF WATER QUALITY PROBLEMS WHERE RAW WATER QUALITY IS VARIABLE.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL, V72 N4

IRIS ACCESSION NUMBER: EW004853

PUBLICATION DATE: APR 80

TITLE: PUMPING STATION RELIABILITY: HOW AND HOW MUCH.

PERSONAL AUTHOR: VALCOUR, HENRY C.

DESCRIPTOR: CASE STUDIES; *DESIGN CRITERIA; ECONOMICS; GUIDELINES; *MAINTENANCE; *PUMPING STATIONS; *RELIABILITY; STANDARDS; SPECIFICATIONS; *WATER DISTRIBUTION

DESCRIPTIVE NOTE: 187-191P.

ABSTRACT: WATER PUMPING STATIONS ARE BUILT FOR A VARIETY OF USES RANGING FROM LARGE INTER BASIN TRANSFER REQUIREMENTS TO MUNICIPAL WATER SUPPLY AND INDUSTRIAL APPLICATIONS. IN PRACTICE THE DEGREE OF RELIABILITY BUILT IN IS DETERMINED MORE BY DESIGNER AND OPERATOR EXPERIENCE THAN BY FORMAL GUIDELINES. SUGGESTIONS ARE MADE TO STANDARDIZE THE APPROACH TO RELIABILITY IN ORDER TO PROVIDE MORE ECONOMICAL AND DEPENDABLE FACILITIES.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL, V72 N4

IRIS ACCESSION NUMBER: EW004854

PUBLICATION DATE: APR 80

TITLE: ORGANIZING TO COPE WITH HAZARDOUS MATERIAL SPILLS.

PERSONAL AUTHOR: RYCKMAN, D. W., RYCKMAN, MARK D.

DESCRIPTOR: ACCIDENT PREVENTION; *CHEMICAL HAZARDS; *DRINKING WATER; *EMERGENCY PLANNING; *HAZARDOUS MATERIALS; *HAZARDOUS SPILLS; *PUBLIC HEALTH; *PLANNING; *WATER SUPPLY; *UTILITIES; *WATER POLLUTION CONTROL

DESCRIPTIVE NOTE: 196-200P.

ABSTRACT: A PRIVATE SYSTEM THAT CAN BE USED BY WATER UTILITIES AS A MODEL FOR ESTABLISHING AND EVALUATING EMERGENCY CONTINGENCY RESPONSE PLANS SHOWS HOW TO DEAL WITH HAZARDOUS SPILLS THAT THREATEN WATER SUPPLIES.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL, V72 N4

IRIS ACCESSION NUMBER: EW004855

PUBLICATION DATE: APR 80

TITLE: EVALUATING THE EFFECTS OF EARTHQUAKES ON BURIED PIPELINES.

PERSONAL AUTHOR: WANG, LEON R. L., CORNELL, HOLLY A.

DESCRIPTOR: *BURIED PIPELINES; *DESIGN; *EARTHQUAKES; ENGINEERING; *PIPES; *SEISMIC DAMAGE; *SEISMIC ANALYSIS; *WATER DISTRIBUTION

DESCRIPTIVE NOTE: 201-207P.

ABSTRACT: RECENT EARTHQUAKE DAMAGE TO WATER LINES HAS EMPHASIZED THE VULNERABILITY OF WATER DISTRIBUTION SYSTEMS. CURRENT RESEARCH ON SEISMIC VULNERABILITY AND THE DESIGN OF BURIED PIPELINES HAS RESULTED IN THE DEVELOPMENT OF SIMPLIFIED METHODS FOR ANALYSIS OF SEISMIC GROUNDSHAKING.

THIS RESEARCH IS USED TO DEVELOP A PROCEDURE FOR THE DESIGN OF PIPELINES THAT CAN RESIST SEISMIC EXCITATIONS.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL, V72 N4

IRIS ACCESSION NUMBER: EW004856

PUBLICATION DATE: APR 80

TITLE: A COMPUTER METHOD FOR LOADING MODEL NETWORKS.

PERSONAL AUTHOR: CESARIO, LEE A., LEE, TIMOTHY K.

DESCRIPTOR: *COMPUTERS; *COMPUTER MODELS; *COMPUTER PROGRAMS; *CONSUMPTION; *NETWORK ANALYSIS; *WATER SUPPLY; *WATER SYSTEMS

DESCRIPTIVE NOTE: 208-213P.

ABSTRACT: THE TASK OF ALLOCATING CONSUMPTION DEMANDS FOR COMPUTER MODELS OF TREATED WATER SYSTEMS CAN BE TIME-CONSUMING AND TEDIOUS. A COMPUTER PROGRAM HAS BEEN DEVELOPED THAT WILL ALLOCATE THESE LOADS TO NODES THAT CAN BE EASILY TRANSFERRED INTO A NETWORK DATA FILE, MAKING IT FEASIBLE TO ADJUST DEMANDS FOR VARIOUS CONDITIONS AND THEREBY PERMITTING THE ENGINEER TO SPEND MORE TIME EXAMINING ALTERNATIVE SYSTEM DESIGNS BECAUSE LESS TIME IS REQUIRED TO PREPARE THE STUDY.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL, V72 N4

IRIS ACCESSION NUMBER: EW004858

PUBLICATION DATE: MAY 80

TITLE: OCEAN OUTFALL DILUTION: EFFECTS OF CURRENTS.

PERSONAL AUTHOR: ROBERTS, PHILIP J. W.

DESCRIPTOR: *DIFFUSION; FIELD TESTS; *HYDRAULICS; *MATHEMATICAL MODELS; *OCEAN ENGINEERING; *OCEAN OUTFALLS; *SEWAGE; UTILITIES; *WASTEWATER TREATMENT; WATER POLLUTION; *WASTE DISPOSAL

DESCRIPTIVE NOTE: 769-782P.

ABSTRACT: DIFFUSERS WERE PLACED NEAR OUTFALL SEWERS IN THE OCEAN OFF SAN FRANCISCO, CALIFORNIA, PERPENDICULAR TO THE MOST ENERGETIC CURRENT COMPONENT. MATHEMATICAL MODEL WAS USED TO PREDICT DIFFUSER DILUTION OF SEWAGE, USING MEASURED OCEANIC CONDITIONS. RESEARCHERS INVESTIGATED EFFECTS OF OCEANIC CONDITIONS, CURRENT SEASON, DIFFUSER ORIENTATION AND DISCHARGE CONDITION ON DILUTION.

AVAILABILITY: JOURNAL OF THE HYDRAULICS DIVISION, V106 N5

IRIS ACCESSION NUMBER: EW004859

PUBLICATION DATE: MAY 80

TITLE: EPA RESEARCH IN URBAN STORMWATER POLLUTION CONTROL.

PERSONAL AUTHOR: FIELD, RICHARD

DESCRIPTOR: *COST ANALYSIS; *ENVIRONMENTAL PROTECTION AGENCY; MODELS; POLLUTION; *RESEARCH; *SEWAGE; *STORMWATER; *URBAN AREAS; UTILITIES; *WATER POLLUTION CONTROL; *WATER POLLUTION; *WATER RUNOFF

DESCRIPTIVE NOTE: 819-825P.

ABSTRACT: THIS STATE-OF-THE-ART REPORT ON THE ENVIRONMENTAL PROTECTION AGENCY'S RESEARCH ON URBAN STORMWATER AND COMBINED SEWER OVERFLOW POLLUTION CONTROL DESCRIBES THE MAJOR ELEMENTS OF THE URBAN RUNOFF POLLUTION CONTROL PROGRAM. COVERED ARE PROBLEM DEFINITION, USERS ASSISTANCE TOOLS, MANAGEMENT ALTERNATIVES (INCLUDING COST ANALYSIS) AND TECHNOLOGY TRANSFER.

AVAILABILITY: JOURNAL OF THE HYDRAULICS DIVISION, V106 N5

IRIS ACCESSION NUMBER: EW004860

PUBLICATION DATE: MAY 80

TITLE: SOURCES OF COMPUTER PROGRAMS IN HYDRAULICS.

DESCRIPTOR: *COMPUTER PROGRAMS; DIFFUSION; ENGINEERING; *GROUNDWATER; *HYDRAULICS; *MODELS; *OCEAN ENGINEERING; OCEANOLOGY; *REFERENCES; *SURFACE RUNOFF; *WATER RESOURCES; *WATER RUNOFF

DESCRIPTIVE NOTE: 915-922P.

ABSTRACT: LISTS BIBLIOGRAPHIES AND PUBLICATIONS THAT LIST THE AVAILABILITY OF VARIOUS MATHEMATICAL, NUMERICAL, AND COMPUTER MODELS FOR GENERAL USE BY HYDRAULIC ENGINEERS. INCLUDED ARE AREAS SUCH AS HYDRAULICS, HYDROLOGY, GROUND WATER, SURFACE WATER, WATER-RESOURCES MANAGEMENT, UNSTEADY FLOW AND ESTUARIES.

AVAILABILITY: JOURNAL OF THE HYDRAULICS DIVISION, V106 N5

IRIS ACCESSION NUMBER: EW004861

PUBLICATION DATE: APR 80

TITLE: ECONOMIC MODEL FOR URBAN WATERSHEDS.

PERSONAL AUTHOR: DEBO, THOMAS N.; AND OTHERS

DESCRIPTOR: *COMPUTERS; COST EFFECTIVENESS; *DRAINAGE; *ECONOMICS; *HYDRAULICS; *MANAGEMENT; *MODELS; PLANNING; *WATER RUNOFF; *URBAN AREAS; *WATER RESOURCES; *WATER SHEDS

DESCRIPTIVE NOTE: 475-487P.

ABSTRACT: DESCRIBED IS THE DEVELOPMENT OF AN ECONOMIC COMPUTER MODEL FOR THE STORM WATER MANAGEMENT PROGRAM. IT IS CAPABLE OF ANALYZING THE COSTS AND BENEFITS ASSOCIATED WITH DIFFERENT STRUCTURAL AND NONSTRUCTURAL FLOOD MITIGATION MEASURES. THE MODEL INCLUDES FOUR STRUCTURAL MEASURES (DETENTION STORAGE, CHANNELIZATION, FLOOD WALLS, LEVELS) AND FOUR NONSTRUCTURAL MEASURES (LAND USE RESTRICTIONS, RELOCATION, FLOOD PROOFING, FLOOD WARNING).

AVAILABILITY: JOURNAL OF THE HYDRAULICS DIVISION, V106 N4

IRIS ACCESSION NUMBER: EW004863

PUBLICATION DATE: MAY 80

TITLE: WATER QUALITY IMPROVEMENT PROGRAM.

PERSONAL AUTHOR: FITZPATRICK, DANIEL W.

DESCRIPTOR: *CITIZENSHIP EDUCATION; *MONITORING; *MANAGEMENT; OPERATIONS (WATER); PUBLIC HEALTH; *UTILITIES; *WATER TREATMENT; *WATER SUPPLY; *WATER QUALITY; *POTABLE WATER

DESCRIPTIVE NOTE: 74-75P.

ABSTRACT: DESCRIBES THE WATER QUALITY IMPROVEMENT PROGRAM DEVELOPED BY THE CITY OF POUGHKEEPSIE, NEW YORK. THE THREE-PRONGED EFFORT INVOLVES INCREASING IN-PLANT TESTING AND MONITORING CAPABILITY THROUGH ADDITIONS OF EQUIPMENT TO THE PUBLIC LABORATORY, ACTION PLANS TO IMPROVE QUALITY OF POTABLE WATER AND DEVELOPING A PUBLIC AWARENESS PROGRAM.

AVAILABILITY: PUBLIC WORKS, V111 N5

IRIS ACCESSION NUMBER: EW004864

PUBLICATION DATE: MAY 80

TITLE: DRAINAGE BASIN CONTAMINATION PROMPTS REGIONAL PLANNING.

PERSONAL AUTHOR: SMITH, STANLEY A., GARDNER, CHARLES D.

DESCRIPTOR: *CALIFORNIA; *DRAINAGE BASINS; *WASTEWATER TREATMENT; WATER QUALITY; *PUBLIC HEALTH; *REGIONAL PLANNING; *WATER POLLUTION; *WATER POLLUTION CONTROL; *WASTE DISPOSAL

DESCRIPTIVE NOTE: 76-77, 130P.

ABSTRACT: DESCRIBES HOW THREE AGENCIES COOPERATED IN CONSTRUCTING A REGIONAL WASTEWATER TREATMENT PLANT NEAR OROVILLE, CALIFORNIA. THE PROBLEMS OF POLLUTION AND HEALTH HAZARDS WERE SOLVED AS A RESULT OF THIS COOPERATIVE VENTURE.

AVAILABILITY: PUBLIC WORKS, V111 N5

IRIS ACCESSION NUMBER: EW004865

PUBLICATION DATE: MAY 80

TITLE: EMPLOYEES WELCOME SHIFT TO 11 1/2 HOUR WORKDAY.

PERSONAL AUTHOR: GOODIN, ROBERT H.

DESCRIPTOR: *JOB SATISFACTION; *WATER TREATMENT; *PRODUCTIVITY; *PERSONNEL; *UTILITIES; *WORK SCHEDULES

DESCRIPTIVE NOTE: 96-97, 130P.

ABSTRACT: DESCRIBES HOW NEW 11 1/2-HOUR WORKDAYS HAVE SOLVED A SERIOUS PROBLEM OF IRREGULARLY SCHEDULED SHIFT WORK, AND ALSO HAS REDUCED EMPLOYEE'S TRANSPORTATION COSTS AT THE GLENCOE, ILLINOIS WATER PLANT.

AVAILABILITY: PUBLIC WORKS, V111 N5

IRIS ACCESSION NUMBER: EW004866

PUBLICATION DATE: MAR 80

TITLE: SETTLING PROPERTIES OF EXTENDED AERATION SLUDGE.

PERSONAL AUTHOR: PITMAN, A. R.

DESCRIPTOR: *ACTIVATED SLUDGE; *OPERATIONS (WASTEWATER); *OXIDATION; SETTLING VELOCITY; *SLUDGE; SUSPENDED SOLIDS; *WASTE DISPOSAL; *WASTEWATER TREATMENT; WASTES

DESCRIPTIVE NOTE: 524-536P. PART I

ABSTRACT: IN STUDIES OF SEVERAL EXTENDED AERATION ACTIVATED SLUDGE PLANTS IN SOUTH AFRICA, IT WAS DETERMINED THAT INITIAL SETTLING VELOCITY OF THE SLUDGE CAN BE EXPRESSED AS A CONSTANT TIMES A POWER OF THE SUSPENDED SOLIDS CONCENTRATIONS FOR CONCENTRATIONS GREATER THAN 2G/L.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION; V52 N3

IRIS ACCESSION NUMBER: EW004867

PUBLICATION DATE: MAR 80

TITLE: ON-SITE WASTEWATER TREATMENT ON PROBLEM SOILS.

PERSONAL AUTHOR: HANSEL, MICHAEL J.; MACHMEIER, ROGER E.

DESCRIPTOR: *DESIGN; DRAINAGE; *FACILITIES; LAND USE; *ON-SITE WASTEWATER TREATMENT; PERCOLATION; *POLLUTION; SEPTIC TANKS; *UTILITIES; *WASTE DISPOSAL; WASTES; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 548-558P. PART I

ABSTRACT: MINNESOTA POLLUTION CONTROL AGENCY HAS DEVELOPED DESIGN CRITERIA FOR BOTH STANDARD ON SITE SYSTEMS AND FOR

ALTERNATIVE SYSTEMS ON VARIOUS PROBLEM SOILS. DESIGN CRITERIA INCLUDED DRAIN-FIELD TRENCHES, SOIL BARRIERS, AND MOUND SYSTEMS.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION; V52 N3

IRIS ACCESSION NUMBER: EW004868

PUBLICATION DATE: MAR 80

TITLE: DESIGN OF AN OVERLAND FLOW SYSTEM.

PERSONAL AUTHOR: TUCKER, DAVID L.; VIVADO, NESTOR D.

DESCRIPTOR: *DESIGN; IRRIGATION; LAGOONS; *LAND APPLICATION; *LAND USE; *OXIDATION; *OVERLAND FLOW; PLANNING; *SEPTIC TANKS; *UTILITIES; WASTES; *WASTE DISPOSAL; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 559-567P. PART I

ABSTRACT: DESCRIBES DESIGN OF OVERLAND FLOW SYSTEM. SEPTIC TANK EFFLUENT IS MIXED WITH RECIRCULATED POND WATER, AND DISTRIBUTED TO AERATION PONDS BEFORE PASSAGE TO THE OXIDATION POND. POND EFFLUENT IS CHLORINATED AND PUMPED TO THE OVERLAND FLOW TERRACES FOR SPRAY IRRIGATION. TERRACE EFFLUENT IS COLLECTED AND CONVEYED TO AN OUTFALL.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION; V52 N3

IRIS ACCESSION NUMBER: EW004869

PUBLICATION DATE: MAR 80

TITLE: TOTAL NITROGEN REMOVAL IN A MULTI-CHANNEL OXIDATION SYSTEM.

PERSONAL AUTHOR: APPLEGATE, CHARLES S.; AND OTHERS

DESCRIPTOR: *ACTIVATED SLUDGE PROCESS; *CHEMICAL REACTIONS; *DESIGNS; DENITRIFICATION; *FACILITIES; *NITROGEN; *OPERATIONS (WASTEWATER); *OXIDATION; *UTILITIES; WASTES; *WASTE DISPOSAL; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 568-577P. PART I

ABSTRACT: DESCRIBES WASTEWATER TREATMENT PLANT WHICH TOTALLY REMOVES NITROGEN FROM WASTEWATER WITHOUT USING SUPPLEMENTAL CARBON SOURCE OR UNUSUAL OPERATOR ATTENTION. THE PLANT IS DESIGNED WITH A CONCENTRIC CHANNEL AERATION TANK. OXYGEN REQUIREMENTS AND CHANNEL MIXING ARE PROVIDED BY ROTATING DISCS.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION; V52 N3

IRIS ACCESSION NUMBER: EW004870

PUBLICATION DATE: MAR 80

TITLE: REMOVAL OF ORGANIC SUBSTANCES BY BIOLOGICALLY ACTIVATED CARBON IN A FLUIDIZED-BED REACTOR.

PERSONAL AUTHOR: TSEZOS, MARIOS; BENEDEK, ANDREW

DESCRIPTOR: *ACTIVATED CARBON; *ABSORPTION; *ORGAINC CHEMISTRY; *ORGANIC COMPOUNDS; *UTILITIES; WASTES; *WASTE DISPOSAL; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 578-586P. PART I

ABSTRACT: THIS STUDY EXAMINES MANY DIFFERENT INORGANIC AS WELL AS ORGANIC ABSORBENTS FOR THE ABSORPTION OF RESIDUAL ORGANIC SUBSTANCES MICROBIALLY GENERATED FROM PHENOL DEGRADATION. BATCH ISOTHERM DATA INDICATE THAT ACTIVATED CARBON IS BY FAR THE BEST ABSORBANT FOR SUCH A PURPOSE.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION; V52 N3

IRIS ACCESSION NUMBER: EW004871

PUBLICATION DATE: MAR 80

TITLE: ENERGY AUTONOMY IN THE WASTEWATER TREATMENT PROCESS.

PERSONAL AUTHOR: BERNARD, JACQUES; DAVIA, PAUL
DESCRIPTOR: *ANAEROBIC DIGESTION; *ENERGY CONSERVATION; *ENERGY; *FUELS; FUEL CONSUMPTION; *METHANE; WASTEWATER TREATMENT; *UTILITIES; *WASTE DISPOSAL; *WASTES

DESCRIPTIVE NOTE: 587-596P. PART I

ABSTRACT: WASTEWATER TREATMENT PLANTS CAN RECOVER A HIGH PERCENTAGE OF THEIR ENERGY NEEDS BY USING NEW TECHNIQUES IN ANAEROBIC DIGESTION THROUGH THE PRODUCTION AND UTILIZATION OF METHANE GAS. THE ACHERES PLANT OUTSIDE PARIS PRODUCES OVER 70% OF ITS ENERGY NEEDS USING THIS PROCESS.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION; V52 N3

IRIS ACCESSION NUMBER: EW004872

PUBLICATION DATE: MAR 80

TITLE: CYANIDE PROBLEMS IN MUNICIPAL WASTEWATER TREATMENT PLANTS.

PERSONAL AUTHOR: LORDI, DAVID T.; AND OTHERS

DESCRIPTOR: *CYANIDE; INDUSTRIAL WASTES; MUNICIPALITIES; *METALS; *STANDARDS; *TOXIC SUBSTANCES; TOXIC WASTES; *UTILITIES; WATER POLLUTION; *WATER POLLUTION CONTROL; *WASTE DISPOSAL

DESCRIPTIVE NOTE: 597-609P. PART I

ABSTRACT: DATA FROM DAILY MONITORING OF WASTEWATER EFFLUENTS FROM THE TREATMENT PLANTS OF GREATER CHICAGO INDICATED THAT ALL EFFLUENTS OCCASIONALLY EXCEED THE STANDARD OF 0.025 MG CYANIDE/L. HEARINGS RESULTED IN A REVISED STANDARD OF 0.10MG/L AS A TOTAL CYANIDE MONTHLY AVERAGE AND 0.20 MG/L FOR ANY 24-HOUR COMPOSITE.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION; V52 N3

IRIS ACCESSION NUMBER: EW004873

PUBLICATION DATE: MAR 80

TITLE: SCALEUP IN ROTATING BIOLOGICAL CONTACTOR DESIGN.

PERSONAL AUTHOR: WILSON, R. W.; AND OTHERS

DESCRIPTOR: *DESIGN; *MUNICIPALITIES; *BIOCHEMICAL OXYGEN DEMAND; *PILOT PROJECTS; RELIABILITY; *ROTATING BIOLOGICAL CONTACTORS; *UTILITIES; *WASTEWATER TREATMENT; *WASTE DISPOSAL; *WASTES

DESCRIPTIVE NOTE: 610-621P. PART I

ABSTRACT: A 12 MONTH PILOT PLANT STUDY WAS CONDUCTED WITH A ROTATING BIOLOGICAL CONTRACTOR TREATING MUNICIPAL WASTEWATER TO DETERMINE THE FACTORS AFFECTING CONTRACTOR SCALEUP AND TO DEVELOP GENERALIZED DESIGN CRITERIA. RECOMMENDED LOADINGS FOR FULL-SCALE CONTRACTOR SYSTEMS ARE PRESENTED BASED ON THE TEST DATA FROM THE 2.0MG UNIT.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION; V52 N3

IRIS ACCESSION NUMBER: EW004874

PUBLICATION DATE: MAR 79

TITLE: QUANTITATIVE SITUATIONAL ANALYSIS - A PLANNING TOOL FOR WATER RESOURCE MANAGERS.

PERSONAL AUTHOR: NICHOLSON, H. JOHNSON; CASTORE, C. H.

DESCRIPTOR: *CASE STUDIES; *DECISION MAKING; DATA COLLECTION; EVALUATION; INTERVIEWS; *MANAGEMENT; *PLANNING; PUBLIC PARTICIPATION; *QUANTITATIVE SITUATIONAL ANALYSIS; SURVEYS; TECHNOLOGICAL DEVELOPMENT; *WATER RESOURCES

DESCRIPTIVE NOTE: 191P. PRICE: $12.00

ABSTRACT: THIS REPORT INDICATES THE ADVANTAGES TO A WATER RESOURCE MANAGER, OF USING QUANTITATIVE SITUATIONAL ANALYSIS (IE. A SYSTEMATIC CASE STUDY) AS A BASIC PROJECT PLANNING TOOL. THIS APPROACH TO PLANNING PROVIDES THE WATER RESOURCE MANAGER WITH A STRAIGHTFORWARD METHOD OF STRUCTURING AND QUANTIFYING PUBLIC INPUT TO THE WATER RESOURCE MANAGEMENT DECISIONS.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, OPERATIONS DIVISION, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW004880

PUBLICATION DATE: APR 79

TITLE: ENERGY REQUIREMENTS FOR SMALL FLOW WASTEWATER TREATMENT SYSTEMS.

PERSONAL AUTHOR: MIDDLEBROOKS, E. J.; AND OTHERS

DESCRIPTOR: DESIGN; *ECONOMICS; *ENERGY; *ENERGY REQUIREMENTS; *FACILITIES; GAS UTILIZATION; LAND USE; *LAND APPLICATION; OPERATIONS (WASTEWATER); *SMALL FLOWS; *WASTEWATER; WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 82P. PRICE: $8.00

ABSTRACT: THIS REPORT SUMMARIZES ENERGY REQUIREMENTS FOR SMALL WASTEWATER TREATMENT SYSTEMS (0.05-5 MILLION GALLONS PER DAY) APPLICABLE TO MILITARY INSTALLATIONS. IT COMPARES VARIOUS TREATMENT COMBINATIONS, AND PRESENTS THE ENERGY REQUIREMENTS FOR THE MOST VIABLE ALTERNATIVE IN TABULAR FORM. IT ALSO PRESENTS ENERGY REQUIREMENTS FOR VARIOUS COMPONENTS OF WASTEWATER TREATMENT SYSTEMS IN A FORMAT MAKING IT CONVENIENT TO CALCULATE THE ENERGY REQUIREMENTS FOR MANY COMBINATIONS OF THE COMPONENTS. IN ADDITION, IT SUMMARIZES ENERGY ESTIMATES MADE BY OTHERS. THE REPORT COMPARES TYPICAL COMBINATIONS OF UNIT OPERATIONS AND PROCESSES USED TO PRODUCE VARIOUS QUALITY EFFLUENTS ON THE BASIS OF ENERGY CONSUMPTION. IT CONCLUDES THAT LAND APPLICATION SYSTEMS ARE THE MOST ENERGY-EFFICIENT WASTEWATER TREATMENT SYSTEMS AND THAT THEY ARE CAPABLE OF PRODUCING AN EQUIVALENT OR HIGHER QUALITY EFFLUENT THAN OTHER TREATMENT SYSTEMS.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, OPERATIONS DIVISION, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW004892

PUBLICATION DATE: AUG 79

TITLE: PROCEEDINGS OF THE FOURTH NATIONAL GROUND WATER QUALITY SYMPOSIUM HELD AT MINNEAPOLIS, MN ON SEPTEMBER 20-22, 1978.

PERSONAL AUTHOR: KERR, ROBERT S.

DESCRIPTOR: DISEASE; *GROUND WATER; GROUND WATER MOVEMENT; LAND APPLICATION; PLANNING; *SYMPOSIUM PROCEEDINGS; STANDARDS; *WATER QUALITY; *WATER RESOURCES; *WATER POLLUTION

DESCRIPTIVE NOTE: 172P. PRICE: $12.00

ABSTRACT: THE SYMPOSIUM PROCEEDINGS WERE CENTERED AROUND NINE MAJOR TOPICS. NATIONAL AUTHORITIES PRESENTED PAPERS REFLECTING PRO, NEUTRAL AND CON VIEWPOINTS. THE FOLLOWING

SUBJECTS WERE ADDRESSED; GROUND WATER POLLUTION, GROUND WATER QUALITY STANDARDS, LAND APPLICATION OF WASTES, THE FEDERAL GROUND PROTECTION PROGRAM, STATE GROUND WATER PROTECTION PROGRAMS, THE 208 PLANNING APPROACH TO GROUND WATER PROTECTION, CONTROLLED DEGRADATION AND/OR PROTECTION ZONES, GROUND WATER MODELS, AND WATER BORNE DISEASE.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, OPERATIONS DIVISION, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW004898

PUBLICATION DATE: 79

TITLE: NEEDS SURVEY (1978). CONVEYANCE AND TREATMENT OF MUNICIPAL WASTEWATER. SUMMARIES OF TECHNICAL DATA.

DESCRIPTOR: ADVANCED PRIMARY TREATMENT; ADVANCED SECONDARY TREATMENT; *ECONOMICS; *FACILITIES; *MUNICIPALITIES; NEEDS ASSESSMENT; *PLANNING; *SECONDARY TREATMENT; *SEWERS; *WATER RESOURCES; *WASTEWATER TREATMENT; *WASTE DISPOSAL

DESCRIPTIVE NOTE: 145P. PRICE: $11.00

ABSTRACT: THIS REPORT IS SUPPLEMENTAL TO THE COST ESTIMATE REPORT TO CONGRESS (FRD-1). IT PROVIDES SUMMARIES OF THE DETAILED TECHNICAL AND COST DATA WHICH WERE REPORTED IN THE 1978 NEEDS SURVEY REPORT. DATA ARE INCLUDED ON SECONDARY TREATMENT, ADVANCED SECONDARY TREATMENT, CORRECTION OF INFILTRATION-INFLOW, MAJOR REHABILITATION OF SEWERS, NEW COLLECTOR SEWERS, NEW INTERCEPTOR SEWERS, CONTROL OF COMBINED SEWERS OVERFLOW AND TREATMENT OR CONTROL OF STORMWATERS.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, OPERATIONS DIVISION, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW004914

PUBLICATION DATE: MAY 80

TITLE: PROGRAM BUDGETS MAKE SENSE OF CENTS.

PERSONAL AUTHOR: GROVER, KATHRYN

DESCRIPTOR: *BUDGETING; COMMUNITY PLANNING; *COST EFFECTIVENESS; MANAGEMENT; MANAGEMENT SYSTEMS; *MUNICIPALITIES; *PERFORMANCE CRITERIA; POLICY FORMATION; *PROGRAM COSTS; *PROGRAM DESCRIPTIONS; *PROGRAM DEVELOPMENT; *PROGRAM EFFECTIVENESS; *PUBLIC WORKS

DESCRIPTIVE NOTE: 51-54P.

ABSTRACT: DESCRIBED ARE HOW PUBLIC WORKS DEPARTMENTS IN TWO COMMUNITIES USE PROGRAM BUDGETS TO CONTROL, EVEN TO CUT, THE COST OF PROVIDING SERVICES.

AVAILABILITY: AMERICAN CITY AND COUNTY; V95 N5

IRIS ACCESSION NUMBER: EW004915

PUBLICATION DATE: MAY 80

TITLE: HOW TO SOLVE PUMP PROBLEMS.

PERSONAL AUTHOR: FRENCH, WILLIAM W.

DESCRIPTOR: *CENTRIFUGAL PUMPS; *EQUIPMENT; *EQUIPMENT MAINTENANCE; *INSTRUCTIONAL MATERIALS; MAINTENANCE; *MECHANICAL EQUIPMENT; *PUMPS

DESCRIPTIVE NOTE: 57-60P.

ABSTRACT: PROVIDED IS A TROUBLESHOOTING CHECKLIST FOR PUMPS WHICH SETS OUT ALL POSSIBLE PROBLEMS, ALL POSSIBLE SOURCES OF TROUBLE, AND WHAT TO DO TO GET PUMPS BACK IN SERVICE. ALSO PROVIDED IS A SHORT GUIDE TO METHODS OF PRIMING CENTRIFUGAL PUMPS.

AVAILABILITY: AMERICAN CITY AND COUNTY; V95 N5

IRIS ACCESSION NUMBER: EW004916

PUBLICATION DATE: MAY 80

TITLE: INDUSTRIAL SURCHARGES THAT INDUSTRY LIKES.

PERSONAL AUTHOR: STONEROOK, HENRY R.; BIRKBECK, RONALD E.

DESCRIPTOR: FACILITIES; *FINANCING; *FLOW MEASUREMENT; *INDUSTRIAL WASTES; *MONITORING; *OHIO; *PROGRAM DESCRIPTIONS; *RATES; *SURCHARGES; *WASTEWATER; *WASTEWATER TREATMENT; WATER POLLUTION CONTROL; WATER POLLUTION CONTROL ACT

DESCRIPTIVE NOTE: 63-65P.

ABSTRACT: DESCRIBED IS THE INDUSTRIAL WASTE MONITORING PROGRAM IMPLEMENTED IN ORRVILLE, OHIO WHICH FAIRLY ALLOCATES INDUSTRIAL WASTEWATER TREATMENT CHARGES BASED ON CONTRIBUTION TO THE POLLUTANT LOAD OF THE CITY'S TREATMENT PLANT.

AVAILABILITY: AMERICAN CITY AND COUNTY; V95 N5

IRIS ACCESSION NUMBER: EW004917

PUBLICATION DATE: MAY 80

TITLE: LEACHATE CONTROL DOESN'T COME EASY.

DESCRIPTOR: BIOCHEMICAL OXYGEN DEMAND; CHEMICAL OXYGEN DEMAND; FILTRATION; *INSTRUCTIONAL MATERIALS; *LANDFILLS; *LEACHING; *POINT POLLUTION; PRETREATMENT; *POLLUTION; *WASTEWATER COLLECTION; *WASTEWATER TREATMENT; *WATER POLLUTION CONTROL

DESCRIPTIVE NOTE: 69-72P.

ABSTRACT: PRESENTED ARE CONSIDERATIONS TO BE MADE IN ATTEMPTING TO MINIMIZE LEACHATE FORMATION IN LANDFILLS AND IN CHOOSING AN EFFICIENT METHOD OF PRETREATING THE LEACHATE. ALSO PRESENTED IS A DESCRIPTION OF THE INNOVATIVE BARRE, MASSACHUSETTS, LANDFILL WHICH SO EFFECTIVELY CONTROLS LEACHATE FORMATION AND SUBSEQUENTLY TREATS IT TO SUCH AN EXTENT THAT IT CAN BE DISCHARGED TO A MAN-MADE TROUT POND.

AVAILABILITY: AMERICAN CITY AND COUNTY; V95 N5

IRIS ACCESSION NUMBER: EW004918

PUBLICATION DATE: MAY 80

TITLE: ANALYZING THE RISK OF DROUGHT: THE OCCOQUAN EXPERIENCE.

PERSONAL AUTHOR: SHEER, DANIEL P.

DESCRIPTOR: *CONSERVATION; *DROUGHT; HYDROLOGY; MANAGEMENT; *NATURAL RESOURCES; *PREDICTION; *POLICY FORMATION; RESERVOIRS; *RISK ANALYSIS; UTILITIES; *WATER AUTHORITY; *WATER RESOURCES; *WATER SUPPLY

DESCRIPTIVE NOTE: 246-253P.

ABSTRACT: DISCUSSED ARE THE DEVELOPMENT AND IMPLEMENTATION OF TECHNIQUES FOR ANALYSING RISK OF EXTREME WATER SHORTAGES IN FAIRFIELD COUNTY, VA. CONTAINS EVALUATION OF CONSERVATION POLICIES APPROPRIATE FOR SIGNIFICANT RISK REDUCTION. INCLUDES DISCUSSION OF POLITICAL AND TECHNICAL INTERACTIONS. OUTLINES DATA GENERATION AND RELEVANCE OF PROCEDURES APPLICATION FOR FUTURE DROUGHT PROBLEMS.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL; V72 N5.

IRIS ACCESSION NUMBER: EW004919

PUBLICATION DATE: MAY 80

TITLE: UPGRADING WATER TREATMENT PLANTS: AN ALTERNATIVE TO NEW CONSTRUCTION.

PERSONAL AUTHOR: FORBES, ROBERT E.; AND OTHERS.

DESCRIPTOR: *COST EFFECTIVENESS; CONSTRUCTION; DESIGN; *DRINKING WATER; ECONOMICS; *FACILITIES; LEGISLATION; *OPERATIONS (WATER); PLANT CAPACITY; REGULATIONS; SAFE DRINKING WATER ACT; *STANDARDS; *UNIT PROCESSES; UTILITIES; *WATER QUALITY; *WATER TREATMENT; *WATER TREATMENT PLANTS; *WATER RESOURCES; *WATER SUPPLY

DESCRIPTIVE NOTE: 254-261P.

ABSTRACT: DESCRIBED ARE MODIFICATION TECHNIQUES THAT CAN IMPROVE FINISHED WATER QUALITY, REDUCE OPERATING COSTS, AND INCREASE PLANT CAPACITY. THE UNIT PROCESSES OF A TYPICAL SURFACE WATER FILTRATION PLANT ARE DISCUSSED UNDER THE HEADINGS OF RAPID MIXING, FLOCCULATION AND SEDIMENTATION, FILTRATION AND PROCESS CONTROL.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL: V72 N5.

IRIS ACCESSION NUMBER: EW004920

PUBLICATION DATE: MAY 80

TITLE: AGGRESSIVE WATER: ASSESSING THE EXTENT OF THE PROBLEM.

PERSONAL AUTHOR: MILLETTE, JAMES R.; AND OTHERS.

DESCRIPTOR: CARDIOVASCULAR SYSTEM; CANCER; *CHEMICAL ANALYSIS; *CORROSION; *DRINKING WATER; *NATIONAL SURVEYS; POLLUTION; *PUBLIC HEALTH; *RESEARCH; *UTILITIES; *WATER DISTRIBUTION; *WATER QUALITY; *WATER RESOURCES; *WATER SUPPLY; *WATER TREATMENT

DESCRIPTIVE NOTE: 262-266P.

ABSTRACT: ANALYZED ARE DATA FROM AN ENVIRONMENTAL PROTECTION AGENCY WATER SAMPLING ANALYSIS SURVEY AND A NATIONWIDE HEALTH SURVEY. STRATIFIED RANDOM SAMPLING COVERED WATER SUPPLIERS SERVING APPROXIMATELY ONE-FIFTH OF THE UNITED STATES. RESULTS INDICATE THAT ALMOST 70 PERCENT OF THE REPRESENTATIVE UTILITIES HAVE MODERATELY TO HIGHLY CORROSIVE WATER.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL; V72 N5.

IRIS ACCESSION NUMBER: EW004921

PUBLICATION DATE: MAY 80

TITLE: THE COSTS OF INTERNAL CORROSION IN WATER SYSTEMS.

PERSONAL AUTHOR: RYDER, ROBERT A.

DESCRIPTOR: *COSTS; COST EFFECTIVENESS; DESIGN; *HOUSING; *INTERNAL CORROSION; *LIFE CYCLE COSTING; *MAINTENANCE; *PLUMBING; *PIPES; UTILITIES; *WATER DISTRIBUTION; *WATER QUALITY; *WATER RESOURCES; *WATER SUPPLY

DESCRIPTIVE NOTE: 267-279P.

ABSTRACT: DISCUSSED IS A STUDY CONDUCTED FOR THE SEATTLE WATER DEPARTMENT. RESULTS INDICATED THAT THE COSTS OF CORROSION OF CONSUMER PLUMBING AND PIPING WERE 10 TIMES HIGHER FOR INITIAL CAPITAL OUTLAY AND 20 TIMES HIGHER FOR ANNUAL MAINTENANCE THAN THE DISTRIBUTION SYSTEM CORROSION COSTS.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL; V72 N5.

IRIS ACCESSION NUMBER: EW004922

PUBLICATION DATE: MAY 80

TITLE: AN EXPERIMENTAL APPROACH TO CORROSION CONTROL.

PERSONAL AUTHOR: SHULL, KENNETH E.

DESCRIPTOR: *COSTS; CHEMICAL ANALYSIS; *CHEMICAL REACTIONS; *CORROSION; *EXPERIMENTAL PROGRAMS; METALS; PHILADELPHIA; *PIPES; REGULATIONS; *RESEARCH METHODOLOGY; STANDARDS; *UTILITIES; *WATER DISTRIBUTION; *WATER QUALITY; WATER SUPPLY; *WATER RESOURCES; *WATER TREATMENT

DESCRIPTIVE NOTE: 280-285P.

ABSTRACT: DESCRIBED IS A 30 YEAR CORROSION AND CONTROL STUDY PROGRAM OF THE PHILADELPHIA SUBURBAN WATER COMPANY. VARIOUS TREATMENT METHODS THAT ARE UTILIZED TO REDUCE CORROSION ARE EVALUATED BY THE APPLICATION OF EXPERIMENTAL DATA.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL; V72 N5.

IRIS ACCESSION NUMBER: EW004923

PUBLICATION DATE: MAY 80

TITLE: MONITORING AND CONTROLLING CORROSION BY POTABLE WATER.

PERSONAL AUTHOR: MULLEN, EDWARD D.; RITTER, JOSEPH A.

DESCRIPTOR: COSTS; *CHEMICAL REACTIONS; *CORROSION; *EXPERIMENTAL PROGRAMS; *DRINKING WATER; *MANAGEMENT; *MONITORING; *PIPES; *PLUMBING; *POTABLE WATER; REGULATIONS; RESEARCH METHODOLOGY; STANDARDS; *UTILITIES; *WATER QUALITY; *WATER RESOURCES; *WATER TREATMENT

DESCRIPTIVE NOTE: 286-291P.

ABSTRACT: THIS ARTICLE DESCRIBES THE MIDDLESEX'S WATER COMPANY CORROSION MONITORING AND CONTROL PROGRAM. AT RESONABLE COST, THIS PROGRAM HAS IMPROVED WATER QUALITY, SAVED CHEMICAL TREATMENT COSTS, AND PROTECTED BOTH THE DISTRIBUTION SYSTEM AND THE CONSUMERS PIPING.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL; V72 N5.

IRIS ACCESSION NUMBER: EW004924

PUBLICATION DATE: MAY 80

TITLE: HEALTH EFFECTS OF ALTERNATE DISINFECTANTS AND THEIR REACTION PRODUCTS.

PERSONAL AUTHOR: BULL, R. J.

DESCRIPTOR: *CANCER; CHEMICAL REACTIONS; *CHLORINE; *CHLORINE DIOXIDE; *DISINFECTION; *DRINKING WATER, *EPIDEMIOLOGICAL STUDIES; ORGANIC CHEMISTRY; OZONE; *PUBLIC HEALTH; *POLLUTION; *RESEARCH; UTILITIES; *WATER TREATMENT; *WATER SUPPLY; *WATER RESOURCES; *TOXICOLOGY

DESCRIPTIVE NOTE: 299-303P.

ABSTRACT: THIS PAPER SUMMARIZES THE FINDINGS OF STUDIES EVALUATING ALTERNATIVES TO CHLORINE FOR DRINKING WATER DISINFECTION. THE RESEARCH PROJECTS DEFINED HEALTH HAZARDS THAT MAY BE ASSOCIATED WITH EACH ALTERNATIVE DISINFECTION AND MONITORED THE REACTION PRODUCTS PRODUCED.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL; V72 N5.

IRIS ACCESSION NUMBER: EW004925

PUBLICATION DATE: MAY 80

TITLE: LABORATORY TECHNIQUE FOR MEASUREMENT OF PH FOR CORROSION CONTROL STUDIES AND WATER NOT IN EQUILIBRIUM WITH THE ATMOSPHERE.

PERSONAL AUTHOR: SCHOCK, MICHAEL R.; AND OTHERS.

DESCRIPTOR: *CHEMICAL ANALYSIS; CHEMICAL REACTIONS; *CORROSION; *LABORATORY PROCEDURES; *LABORATORY TECHNIQUES; *PH; *RESEARCH; *UTILITIES; *WATER DISTRIBUTION; *WATER QUALITY; *WATER SUPPLY; *WATER RESOURCES

DESCRIPTIVE NOTE: 304-306P.

ABSTRACT: WATER QUALITY ANALYSES ARE VERY SENSITIVE, AND IT IS CRITICAL THAT THE PH BE MEASURED AS ACCURATELY AS POSSIBLE. THIS ARTICLE DESCRIBES A NEW MEASUREMENT PROCEDURE.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL; V72 N5.

IRIS ACCESSION NUMBER: EW004932

PUBLICATION DATE: APR 80

TITLE: REPORT ON THE APPLICATION OF WORKFORCE PLANNING METHODOLOGY IN THE CUYAHOGA COUNTY SANITARY ENGINEERS OPERATIONS AND MAINTENANCE SECTIONS.

DESCRIPTOR: *ADMINISTRATION; CHEMISTS; CAREER LADDERS; *ENGINEERS; *MANPOWER NEEDS; *MAINTENANCE; *OPERATIONS; OCCUPATIONAL TITLES; OPERATIONS (WASTEWATER TREATMENT); *PERSONNEL NEEDS; *PLANNING; *SEWERS; *SANITARY ENGINEERING; *TECHNICIANS; *TRAINING; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 46P.

ABSTRACT: THIS REPORT CONTAINS A DESCRIPTION OF THE MANPOWER PLANNING PROCESS AS DEVELOPED BY THE WORKFORCE

PLANNING ASSOCIATES OF MCLEAN, VIRGINIA AND USED BY THE CAYAHOGA COUNTY SANITARY ENGINEER'S OPERATIONS AND MAINTENANCE SECTIONS. THE PURPOSE OF THE PROJECT WAS TO DETERMINE THE EMPLOYMENT AND TRAINING NEEDS FOR THE DEPARTMENT. IT ALSO DETERMINED SELECTED CHARACTERISTICS OF CURRENT AND EXPECTED EMPLOYMENT. IT DEMONSTRATED A PROCESS FOR IDENTIFYING NEEDS AND MANPOWER PLANNING METHODOLOGY FOR MEETING THEM.

AVAILABILITY: MICHAEL G KORDIC, RESEARCH ASSOCIATE, CUYAHOGA COMMUNITY COLLEGE, 2900 COMMUNITY COLLEGE AVENUE, CLEVELAND, OH 44115.

IRIS ACCESSION NUMBER: EW004933

TITLE: BASIC GAS CHROMATOGRAPHY.

DESCRIPTOR: *AUDIOTAPE CASSETTES; ANALYTICAL TECHNIQUES; *CHEMISTRY; *CHROMATOGRAPHY; ELECTRO ANALYTICAL CHEMISTRY; *GAS CHROMATOGRAPHY; *INSTRUCTIONAL MATERIALS; *INSTRUMENTATION; *LABORATORY TECHNIQUES; LIQUID CHROMATOGRAPHY; RESEARCH; STATISTICS; SPECTROSCOPY

DESCRIPTIVE NOTE: SIX AUDIOTAPE CASSETTES AND A 110 PAGE MANUAL PRICE: $170.00

ABSTRACT: THIS GUIDE TO BASIC CHROMATOGRAPHY INCLUDES SIX AUDIOTAPE CASETTES AND A 110 PAGE MANUAL. THIS INTRODUCTION TO THE SUBJECT COVERS BASIC THEORY, INSTRUMENTATION, SELECTION OF PROPER EQUIPMENT, AND CONDITIONS FOR SEPARATIONS. PROPER PROCEDURES FOR QUALITATIVE AND QUANTITATIVE ANALYSIS ARE ALSO DISCUSSED, INCLUDING CHROMATOGRAPHIC AND NON-CHROMATOGRAPHIC METHODS OF IDENTIFICATION, SAMPLING, AND STATISTICAL TREATMENT OF DATA. MEASUREMENT OF FLOW RATES, AND PREPARING COLUMNS AND OTHER LABORATORY TECHNIQUES ARE ALSO DESCRIBED.

AVAILABILITY: ACS AUDIO COURSES, AMERICAN CHEMICAL SOCIETY, DEPARTMENT OF EDUCATIONAL ACTIVITIES, 1155 16TH STREET, N.W., WASHINGTON, D.C. 20036

IRIS ACCESSION NUMBER: EW004934

TITLE: CARBON-13 NMR SPECTROSCOPY.

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *AUDIOTAPE CASSETTES; BIOCHEMISTRY; *CHEMICAL ANALYSIS; *CARBON-13; *CHEMISTRY; *INSTRUCTIONAL MATERIALS; *INSTRUMENTATION; *LABORATORY TECHNIQUES; MOLECULAR STRUCTURE ANALYSIS; *NUCLEAR MAGNETIC RESONANCE; *ORGANIC CHEMISTRY; RESEARCH; *SPECTROSCOPY

DESCRIPTIVE NOTE: SIX AUDIOTAPE CASSETTES AND A 240 PAGE MANUAL PRICE: $205.00

ABSTRACT: THIS GUIDE TO CARBON-13 NUCLEAR MAGNETIC RESONANCE (N.M.R.) INCLUDES SIX AUDIOTAPE CASSETTES AND A 240 PAGE MANUAL. THE MATERIALS EMPHASIZE SOLVING PRACTICAL CHEMICAL PROBLEMS. THEORETICAL TREATMENTS ARE QUALITATIVE; APPLICATIONS TO MOLECULAR STRUCTURE ANALYSIS ARE STRESSED. THE MATERIALS PROVIDE A NON-MATHEMATICAL INTRODUCTION TO FOURIER TRANSFORM N.M.R. AND DISCUSSIONS OF VARIOUS CLASSES OF COMPOUNDS INCLUDING ALIPHATICS, AROMATICS, IONS AND OTHER INTERMEDIATES, ORGANOMETALICS, NATURAL PRODUCTS, AND SYNTHETIC AND BIOLOGICAL MACROMOLECULES. SPIN-RELAXATION PARAMETERS ARE INTRODUCED AND THEIR USE IN C-13 N.M.R. IS DEMONSTRATED WITH EXAMPLES.

AVAILABILITY: ACS AUDIO COURSES, AMERICAN CHEMICAL SOCIETY, DEPARTMENT OF EDUCATIONAL ACTIVITIES, 1155 16TH STREET, N.W., WASHINGTON, D.C. 20036

IRIS ACCESSION NUMBER: EW004935

TITLE: ATOMIC ABSORPTION SPECTROSCOPY.

DESCRIPTOR: *ATOMIC ABSORPTION SPECTROSCOPY; *AUDIOTAPE CASSETTES; *ANALYTICAL TECHNIQUES; *CHEMISTRY; *INSTRUMENTATION; *INSTRUCTIONAL MATERIALS; *LABORATORY TECHNIQUES; *SPECTROSCOPY; *SPECTROMETRY

DESCRIPTIVE NOTE: EIGHT AUDIOTAPE CASSETTES AND A 240 PAGE MANUAL PRICE: $240.00

ABSTRACT: THIS GUIDE TO ATOMIC ABSORPTION SPECTROSCOPY INCLUDES EIGHT AUDIOTAPE CASSETTES AND A 240 PAGE MANUAL. THE COURSE EMPHASIZES PRACTICAL ASPECTS COVERING TYPES OF BURNERS, NEBULIZERS, AND ATOMIZERS CURRENTLY USED; COMPONENTS OF THE SPECTROMETER (LAMPS, MONOCHROMETERS, DETECTORS AND READOUT DEVICES); THE SOURCE OF AND SOLUTIONS TO INTERFERENCE PROBLEMS; BACKGROUND CORRECTION; DETERMINATION OF UNKNOWN METAL CONCENTRATIONS AND PROPER SAMPLE PREPARATION TECHNIQUES. EXTENSIVE REFERENCES AND NUMEROUS PROBLEMS WITH ANSWERS REINFORCE LEARNING.

AVAILABILITY: ACS AUDIO COURSES, AMERICAN CHEMICAL SOCIETY, DEPARTMENT OF EDUCATIONAL ACTIVITIES, 1155 16TH STREET, N.W., WASHINGTON, D.C. 20036

IRIS ACCESSION NUMBER: EW004936

TITLE: CHEMICAL BASES OF ENVIRONMENTAL ISSUES.

DESCRIPTOR: ACID RAIN; AUTOMOBILE EMISSION CONTROL; *AUDIOTAPE CASSETTES; *ATMOSPHERE; *BIOSPHERE; CHEMISTRY; CARCINOGENS; *ENVIRONMENTAL PROBLEMS; *ENERGY; ENERGY SOURCES; *HYDROSPHERE; HEAVY METALS; *INSTRUCTIONAL MATERIALS; NATURAL RESOURCES; PETROLEUM; PUBLIC HEALTH; TOXICOLOGY; TECHNOLOGY

DESCRIPTIVE NOTE: SIX AUDIOTAPE CASSETTES AND A 173 PAGE MANUAL PRICE: $165.00

ABSTRACT: THESE MATERIALS ARE CONCERNED WITH CHEMICAL ASPECTS OF ENVIRONMENTAL ISSUES. INCLUDED ARE SIX AUDIOTAPE CASSETTES AND A 173-PAGE MANUAL. THE COURSE COVERS FOUR BROAD AREAS-ENERGY, THE ATMOSPHERE, THE HYDROSPHERE AND THE BIOSPHERE. THE MANUAL PROVIDES A CLEAR UNDERSTANDING OF THE CHEMICAL BASES OF THE PROBLEMS, SOLUTIONS, AND CONTROVERSIES INVOLVED. AMONG THE SUBJECTS DISCUSSED ARE DWINDLING NATURAL GAS AND PETROLEUM RESOURCES, FISSION AND FUSION AS ENERGY

SOURCES, AUTOMOBLIE EMISSION CONTROL, ACID RAIN, EUTROPHICATION OF LAKES; LEAD, MERCURY AND CADMIUM POISONING; AND ENVIRONMENTAL LINKS TO CANCER. THE COURSE ADDRESSES THESE CONTROVERSIAL ISSUES IN TERMS OF BOTH THE CHEMISTRY AND TECHNOLOGY INVOLVED.

AVAILABILITY: ACS AUDIO COURSES, AMERICAN CHEMICAL SOCIETY, DEPARTMENT OF EDUCATIONAL ACTIVITIES; 1155 16TH STREET, N.W., WASHINGTON, D.C. 20036

IRIS ACCESSION NUMBER: EW004937

TITLE: PROBABILITY AND STATISTICS FOR CHEMISTS.

DESCRIPTOR: *AUDIOTAPE CASSETTES; BEST ESTIMATES; CURVE FITTING; CONFIDENCE INTERVALS; *CHEMISTRY; CONTINEOUS DISTRIBUTIONS; DISTRIBUTION PARAMETERS; ERRORS; FREQUENCY; GOODNESS-OF-FIT; HYPOTHESIS TESTING; *INSTRUCTIONAL MATERIALS; *MATHEMATICS; *PROBABILITY; *STATISTICS

DESCRIPTIVE NOTE: EIGHT AUDIOTAPE CASSETTES AND A 112 PAGE MANUAL PRICE: $230.00

ABSTRACT: THIS GUIDE INCLUDES EIGHT AUDIOTAPE CASSETTES AND A 112 PAGE MANUAL. THE COURSE IS DESIGNED TO PROVIDE SCIENTIFIC PROFESSIONALS AND STUDENTS WITH A FIRM BASIS IN PROBABILITY AND STATISTICS WHILE AVOIDING COMPLEX MATHEMATICAL DERIVATIONS. THE FIRST HALF OF THE COURSE IS DEVOTED TO PROBABILITY, COVERING FUNDAMENTALS, FREQUENCY FUNCTIONS, DISTRIBUTION PARAMETERS AND CONTINUOUS DISTRIBUTIONS. THE REMAINDER OF THE COURSE DEALS WITH STATISTICS, INCLUDING DISCUSSION OF HYPOTHESIS TESTING, BEST ESTIMATES, GOODNESS-OF-FIT, CONFIDENCE INTERVALS, WEIGHTING, PROPAGATION OF ERRORS, AND CURVE FITTING. NUMEROUS EXAMPLES FROM CHEMISTRY, AS WELL AS FROM POKER GAMES AND DICE ARE CITED TO ILLUSTRATE FUNDAMENTAL PRINCIPLES. PROBLEM SETS FOLLOW EACH SECTION TO AID IN REINFORCING THE MATERIAL, AND ANSWERS AND DISCUSSIONS OF THEM ARE PROVIDED.

AVAILABILITY: ACS AUDIO COURSES, AMERICAN CHEMICAL SOCIETY, DEPARTMENT OF EDUCATIONAL ACTIVITIES, 1155 16TH STREET, N.W., WASHINGTON, D.C. 20036

IRIS ACCESSION NUMBER: EW004938

TITLE: MODERN THEORY OF ACIDS AND BASES.

DESCRIPTOR: *AUDIOTAPE CASSETTES; *ACIDS; *BASES; *CHEMISTRY; *INSTRUCTIONAL MATERIALS; *INORGANIC CHEMISTRY; *ORGANIC CHEMISTRY

DESCRIPTIVE NOTE: TWO AUDIOTAPE CASSETTES AND A 64 PAGE MANUAL PRICE: $95.00

ABSTRACT: THIS GUIDE TO MODERN THEORY OF ACIDS AND BASES INCLUDES TWO AUDIOTAPE CASSETTES AND A 64-PAGE MANUAL. IT COVERS THE AREA OF GENERALIZED ACIDS AND BASES AND THE COMPLEXES FORMED BETWEEN THEM. THE COURSE INCLUDES DISCUSSIONS OF COORDINATION COMPOUNDS ORGANIC AND INORGANIC MOLECULES, CHARGE-TRANSFER COMPLEXES, HYDROGEN-BONDED COMPLEXES, AND FREE RADICAL COMPLEXES. THE PRINCIPLE OF HARD AND SOFT ACIDS AND BASES IS INTRODUCED AND APPLIED TO APPROPRIATE TOPICS IN ORGANIC AND INORGANIC CHEMISTRY. REPRINTS OF THE BASIC ARTICLES IN THIS FIELD ARE INCLUDED.

AVAILABILITY: ACS AUDIO COURSES, AMERICAN CHEMICAL SOCIETY, DEPARTMENT OF EDUCATIONAL ACTIVITIES, 1155 16TH STREET, N.W., WASHINGTON, D.C. 20036

IRIS ACCESSION NUMBER: EW004939

TITLE: MODERN LIQUID CHROMATOGRAPHY.

DESCRIPTOR: *AUDIOTAPE CASSETTES; *CHEMISTRY; *CHROMATOGRAPHY; *INSTRUCTIONAL MATERIALS; INSTRUMENTATION; ION-EXCHANGE; *LIQUID CHROMATOGRAPHY; *LABORATORY TECHNIQUES; *LABORATORY METHODS

DESCRIPTIVE NOTE: TWELVE AUDIOTAPE CASSETTES AND A 330 PAGE MANUAL PRICE: $250.00

ABSTRACT: THIS GUIDE TO MODERN LIQUID CHROMATOGRAPHY INCLUDES 12 AUDIOTAPE CASSETTES AND A 330 PAGE MANUAL. IT IS DESIGNED TO PROVIDE A PRACTICAL UNDERSTANDING OF MODERN LIQUID CHROMATOGRAPHY. THE COURSE COVERS THEORY, COLUMNS, INTERPRETATION OF DATA, AND INSTRUMENTATION, AS WELL AS DESCRIPTIONS OF INDIVIDUAL METHODS; LIQUID-LIQUID, EXCLUSION ION-EXCHANGE, AND ADSORPTION. THE GENERAL ELUTION PROBLEM IS EXPLAINED AND ALSO THE ADJUSTMENT OF SEPARATION CONDITIONS AND COLUMN LENGTH FOR CERTAIN RESOLUTIONS. DISCUSSIONS OF PREPARATIVE SEPARATIONS AND CLASSIFICATIONS OF LIQUID CHROMATOGRAPHY SOLVENTS ARE INCLUDED.

AVAILABILITY: ACS AUDIO COURSES, AMERICAN CHEMICAL SOCIETY, DEPARTMENT OF EDUCATIONAL ACTIVITIES, 1155 16TH STREET, N.W., WASHINGTON, D.C. 20036

IRIS ACCESSION NUMBER: EW004940

TITLE: LABORATORY TECHNIQUES IN ORGANIC CHEMISTRY.

PERSONAL AUTHOR: FESSENDEN, RALPH J.; FESSENDEN, JOAN S.

DESCRIPTOR: *AUDIOTAPE CASSETTES; *CHEMISTRY; INSTRUMENTATION; *INSTRUCTIONAL MATERIALS; *LABORATORY TECHNIQUES; LABORATORY EQUIPMENT; MEASUREMENT; *ORGANIC CHEMISTRY

DESCRIPTIVE NOTE: EACH SLIDE/SOUND LECTURE $85.00-COMPLETE SET OF 10 $750.00.

ABSTRACT: THIS GUIDE TO LABORATORY TECHNIQUES IN ORGANIC CHEMISTRY INCLUDES TEN AUDIOTAPE CASSETTES AND A 69 PAGE SUPPLEMENTARY MANUAL. IT IS DESIGNED TO TEACH AND SHARPEN SKILLS IN THE LABORATORY AND INCLUDES CORRECT TECHNIQUES, PROCEDURES AND INSTRUMENTATION.

AVAILABILITY: ACS AUDIO COURSES, AMERICAN CHEMICAL SOCIETY, DEPARTMENT OF EDUCATIONAL ACTIVITIES, 1155 16TH STREET, N.W., WASHINGTON, D.C. 20036.

IRIS ACCESSION NUMBER: EW004941
PUBLICATION DATE: 78

TITLE: MERCURY CONTAMINATION STANDARDS FOR MARINE ENVIRONMENTS.

PERSONAL AUTHOR: EISLER, RONALD.

DESCRIPTOR: *AQUATIC ECOLOGY; ECOLOGY; *ESTUARIES; ECOLOGICAL EFFECTS; FIELD STUDIES; FOOD CHAINS; GENETICS; LABORATORY STUDIES; *MERCURY; *MARINE BIOLOGY; *OCEANOLOGY; *POLLUTION STANDARDS; POLLUTION; PUBLIC HEALTH; *TOXICOLOGY; *WATER QUALITY STANDARDS

DESCRIPTIVE NOTE: 36P. PRICE: $6.00

ABSTRACT: SELECTED TECHNICAL LITERATURE ON BIOLOGICAL AND ECOLOGICAL EFFECTS OF MERCURY COMPOUNDS ON MARINE AND ESTUARINE BIOTA IS REVIEWED. POTENTIAL AND ACTUAL HAZARDS TO PUBLIC HEALTH THROUGH MARINE VECTORS ARE CONSIDERED. WITHIN THIS FRAMEWORK, APPROACHES FOR ESTABLISHING MERCURY CONTAMINATION STANDARDS AND SALINE ENVIRONMENTS ARE PRESENTED.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, OPERATIONS DIVISION, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW004942

PUBLICATION DATE: OCT 79
TITLE: AUTOMATED MEASUREMENTS OF INFRARED SPECTRA OF CHROMATOGRAPHICALLY SEPARATED FRACTIONS.

PERSONAL AUTHOR: GRIFFITHS, PETER R.

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *AUTOMATION; *CHROMATOGRAPHY; CHEMICAL ANALYSIS; GAS CHROMATOGRAPHY; *INSTRUMENTATION; *INFRARED SPECTRA; *LABORATORY TECHNIQUES; LIQUID CHROMATOGRAPHY; *MEASUREMENT; *ORGANIC COMPOUNDS; POLLUTION; *RESEARCH; *SPECTROMETRY; *WATER POLLUTION CONTROL

DESCRIPTIVE NOTE: 68P. PRICE: FREE OF CHARGE

ABSTRACT: THIS REPORT EXAMINES THE DEVELOPMENT OF THE FOURIER TRANSFORM INFRARED SPECTROSCOPY WITH GAS AND HIGH PERFORMANCE LIQUID CHROMATOGRAPHS. IT DETAILS THE TECHNIQUES WHEREBY THIS NEW ALTERNATIVE CAN OVERCOME THE CONVENTIONAL MASS SPECTROMETRY PROBLEMS OF COMPOUND IDENTIFICATION. THE REPORT CONCLUDES THAT UTILIZATION OF HIGH PRESSURE LIQUID CHROMATOGRAPHY WILL IMPROVE IDENTIFICATION OF LESS VOLATILE TRACE ORGANIC WATER POLLUTANTS AT THE MILLIGRAM PER LITER OR MICROGRAM PER LITER LEVEL.

AVAILABILITY: ENVIRONMENTAL RESEARCH LABORATORY, USEPA, COLLEGE STATION ROAD, ATHENS, GA 30605

IRIS ACCESSION NUMBER: EW004943
PUBLICATION DATE: FEB 78

TITLE: MANAGEMENT OF WASTEWATER RESIDUALS WITH IRON (VI) FERRATE.

DESCRIPTOR: *CHLORINATION; *DISINFECTION; *IRON; *MANAGEMENT; *OPERATIONS (WASTEWATER); PATHOGENS; *WASTEWATER TREATMENT; WATER QUALITY; WATER POLLUTION CONTROL

DESCRIPTIVE NOTE: 205P. PRICE: $13.00

ABSTRACT: ENVIRONMENTAL CONSTRAINTS ON THE USE OF CHLORINE FOR WASTEWATER DISINFECTION HAS INCREASED THE NEED FOR ALTERNATIVE TREATMENT CHEMICALS. IT HAS BECOME APPARENT THAT CHLORINE TREATMENT MAY INTRODUCE TOXIC, SOLUBLE CHLORINATED ORGANICS INTO THE WASTE STREAM. RECENT WORK WITH IRON (VI) FERRATE HAS BEEN UNDERTAKEN TO EVALUATE ITS POTENTIAL AS A SUBSTITUTE FOR CHLORINE IN WASTEWATER TREATMENT PROCESSES. DUE TO THE ABILITY OF IRON TO ACT AS A COAGULANT AND NUTRIENT SCAVENGER, AS WELL AS AN OXIDANT, IT HOLDS PROMISE OF BEING A MULTIPURPOSE ADDITIVE. THE CAPACITY OF FERRATE TO TREAT SECONDARY AND PRIMARY SEWAGE TREATMENT EFFLUENTS AND ITS GERMICIDAL EFFECTIVENESS IN SECONDARY EFFLUENTS AND RAW SEWAGE ARE DISCUSSED. THE EFFECTIVENESS OF FERRATE AS A DISINFECTANT AGAINST ENTERIC PATHOGENS AND THE OPTIONAL CONCENTRATIONS OF FERRATE NEEDED TO PRODUCE RAPID DIE-OFF OF THESE BACTERIA ARE EXAMINED. A DISCUSSION OF PH ON DISINFECTION KINETICS, THE EFFECT OF TEMPERATURE, SUSPENDED SOLIDS, AND THE ROLE OF DISSOLVED ORGANIC MATTER ARE ALSO INCLUDED.
AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, OPERATIONS DIVISION, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW004945

PUBLICATION DATE: 76

TITLE: ENVIRONMENTAL ASPECTS OF IRRIGATION AND DRAINAGE.

DESCRIPTOR: *CONFERENCE REPORTS; *DRAINAGE; *ENVIRONMENT; ECONOMICS; *IRRIGATION; INTERDISCIPLINARY APPROACH; *MANAGEMENT; MODELING; *PLANNING; RESEARCH; *WATER RESOURCES; WATERSHEDS; *WATER QUALITY

DESCRIPTIVE NOTE: 739P. PRICE: $20.00

ABSTRACT: THIS CONFERENCE UTILIZED AN INTERDISCIPLINARY APPROACH IN ITS ANALYSIS OF IRRIGATION AND DRAINAGE PROBLEMS. ENGINEERS, ECONOMISTS, POLITICAL AND SOCIAL SCIENTISTS EXAMINED THE QUANTITATIVE AND QUALITATIVE INTERNATIONAL ASPECTS OF NORTH AMERICAN BOUNDARY WATERS. PRESENT AND FUTURE WATER RESOURCES RESEARCH, MANAGEMENT AND PLANNING WERE DISCUSSED IN TERMS OF MODELING AND INVOLVED A SYSTEMS APPROACH. THE RELATED PROBLEMS OF WATER CONVEYANCE DRAINAGE DESIGN, ENVIRONMENTAL PROTECTION, ECONOMIC DEVELOPMENT AND ALTERATION IN WATER QUALITY WERE CONSIDERED.

AVAILABILITY: AMERICAN SOCIETY OF CIVIL ENGINEERS, PUBLICATIONS SALES, 345 EAST 47TH STREET, NEW YORK, NY 10017

IRIS ACCESSION NUMBER: EW004947

PUBLICATION DATE: 75

TITLE: EXTENDED AERATION PLANT OPERATORS SKILL TRAINING PROGRAM-INSTRUCTOR SET AND INDIVIDUAL STUDENT MATERIALS.

DESCRIPTOR: *AUDIOVISUAL AIDS; EQUIPMENT; *EXTENDED AERATION PLANTS; EFFLUENTS; *FACILITIES; *INSTRUCTIONAL MATERIALS; *OPERATIONS (WASTEWATER); POST SECONDARY EDUCATION; WATER POLLUTION CONTROL; *WASTEWATER TREATMENT; WASTE DISPOSAL

DESCRIPTIVE NOTE: 225P. PRICE: $140.00

ABSTRACT: THIS EXTENDED AERATION SKILL TRAINING PROGRAM IS DESIGNED FOR THOSE STUDENTS WHO HAVE SUCCESSFULLY COMPLETED THE WATER POLLUTION CONTROL FEDERATION'S BASIC COURSE FOR WASTEWATER TREATMENT PLANT OPERATIONS. THE PROGRAM PROVIDES AN OVERALL DESCRIPTION OF THE EXTENDED AERATION TREATMENT PLANT, A DESCRIPTION OF THE INDIVIDUAL COMPONENTS WHICH PERFORM THE MAJOR OPERATING FUNCTIONS, SPECIFIC OPERATING INFORMATION AND CORRECTIVE/PREVENTIVE MAINTENANCE ADVICE. THE PROGRAM INCLUDES CASSETTE, TAPES, SLIDES, PROGRAM ADMINISTRATORS HANDBOOK AND STUDENT SELF-INSTRUCTION WORKBOOK.

AVAILABILITY: WATER POLLUTION CONTROL FEDERATION, 2626 PENNSYLVANIA AVENUE, N.W. WASHINGTON, D.C. 20037

IRIS ACCESSION NUMBER: EW004949

PUBLICATION DATE: 79

TITLE: LAND APPLICATION OF WASTES: VOL. II.

PERSONAL AUTHOR: LOEHR, RAYMOND C.

DESCRIPTOR: *AGRICULTURAL WASTES; DESIGN; *INDUSTRIAL WASTES; *LAND TREATMENT; *LAND APPLICATION; MONITORING; *MUNICIPAL WASTES; MANAGEMENT; *SEWAGE; TOXIC SUBSTANCES; *WASTEWATER TREATMENT; *WASTE DISPOSAL; *WATER POLLUTION CONTROL

DESCRIPTIVE NOTE: 431P. PRICE: $22.50

ABSTRACT: THIS VOLUME PROVIDES A COMPREHENSIVE ANALYSIS OF AN ALTERNATIVE WASTEWATER TREATMENT SYSTEM THAT IS TECHNICALLY AND ECONOMICALLY FEASIBLE FOR MANY COMMUNITIES AND INDUSTRIES. IT EXAMINES THE USE OF CAREFULLY ENGINEERED LAND TREATMENT SYSTEMS FOR MUNICIPAL, INDUSTRIAL AND AGRICULTURAL WASTES. THE BOOK CONTAINS SCIENTIFIC AND ENGINEERING DETAILS NECESSARY TO EVALUATE, DESIGN, AND MANAGE A LAND TREATMENT SYSTEM.

AVAILABILITY: VAN NOSTRAND REINHOLD CO., 135 WEST 50TH ST., NEW YORK, NY 10020

IRIS ACCESSION NUMBER: EW004950

PUBLICATION DATE: 79

TITLE: HOW TO DEVELOP AND CONDUCT SUCCESSFUL EMPLOYEE ATTITUDE SURVEYS.

PERSONAL AUTHOR: DAVIDSON, WILLIAM L.

DESCRIPTOR: *ATTITUDE SURVEYS; BEHAVIORAL SCIENCE RESEARCH; *EMPLOYEES; JOB SATISFACTION; *MANAGEMENT; *MANAGEMENT GUIDES; PLANNING; *QUESTIONAIRES; *SURVEYS

DESCRIPTIVE NOTE: 258P. PRICE: $69.50.

ABSTRACT: THIS REPORT PROVIDES GUIDELINES FOR DEVELOPING AND CONDUCTING AN EMPLOYEE ATTITUDE SURVEY. THE CRITICAL PLANNING STAGES, QUESTIONNAIRE, SURVEY ADMINISTRATION AND INTERVIEWING TECHNIQUES ARE EXPLAINED IN DEPTH. THE REPORT ALSO INCLUDES INFORMATION ON ANALYZING AND EVALUATING THE DATA IN ORDER TO DEVELOP AN EFFECTIVE FEEDBACK MODEL.

AVAILABILITY: DARTNELL, 4660 REAVENWOOD AVE., CHICAGO, IL 60640

IRIS ACCESSION NUMBER: EW004951

PUBLICATION DATE: 79

TITLE: HOW TO REDUCE EMPLOYEE ABSENTEEISM... CURE TARDINESS... AND BUILD EMPLOYEE MORALE.

PERSONAL AUTHOR: LAWSON, JOSEPH W. P.

DESCRIPTOR: *EMPLOYEE ABSENTEEISM; *EMPLOYEE MORALE; *INSTRUCTIONAL MATERIALS; *JOB ENRICHMENT; *MANAGEMENT; *MANAGEMENT GUIDELINES; ORIENTATION PROCEDURES; *SUPERVISION; *TARDINESS

DESCRIPTIVE NOTE: 438P. PRICE: $55.50

ABSTRACT: THIS MANAGEMENT GUIDE EXAMINES THE PROBLEMS OF EMPLOYEE ABSENTEEISM, TARDINESS AND EMPLOYEE MORALE. IT INCLUDES SECTIONS ON HOW TO ASSESS EMPLOYEE ATTITUDES TOWARD ABSENTEEISM, METHODS FOR ESTIMATING THE COSTS OF THE PROBLEM AND RECOMENDATIONS FOR CONTROLLING THE EXTENT OF THE PROBLEM.

AVAILABILITY: DARTNELL, 4660 RAVENWOOD AVE., CHICAGO, IL 60640

IRIS ACCESSION NUMBER: EW004954

PUBLICATION DATE: 80

TITLE: BIOLOGICAL MONITORING FOR ENVIRONMENTAL EFFECTS.

PERSONAL AUTHOR: WORF, DOUGLAS L.

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *BIOLOGY; *ECOLOGY;

ENVIRONMENT; *LABORATORY PROCEDURES; *MONITORING; *POLLUTION; SOILS; *WATER QUALITY; *WATER POLLUTION CONTROL

DESCRIPTIVE NOTE: 227P. PRICE: $22.95

ABSTRACT: THIS BOOK CONTAINS PAPERS PRESENTED BY ENGINEERS AND SCIENTISTS AT A CONFERENCE/WORKSHOP ON MONITORING THE BIOLOGICAL CHANGES IN THE ENVIRONMENT. IT CONTAINS RESEARCH FINDINGS AND RECOMMENDATIONS FOR THE FUTURE OF BIOLOGICAL MONITORING. THE TOPICS INCLUDE WATER POLLUTION, ECOLOGICAL, TERRESTRIAL PLANT AND SOIL BIOMONITORING.

AVAILABILITY: D.C. HEATH & COMPANY, 2700 N RICHARDT AVE. INDIANAPOLIS, IN 46219

IRIS ACCESSION NUMBER: EW004955

PUBLICATION DATE: MAY 79

TITLE: A ROUTINE WATER MONITORING TEST FOR MUTAGENIC COMPOUNDS.

PERSONAL AUTHOR: JOHNSTON, JAMES B.; HERRON, JAMES N.

DESCRIPTOR: *DRINKING WATER; *MONITORING; LABORATORY TECHNIQUES; *MUTAGENIC COMPOUNDS; MICROBIOLOGY; *OPERATIONS (WATER); PUBLIC HEALTH; *SURFACE WATERS; *WATER SUPPLY; *WATER TREATMENT; *WATER QUALITY

DESCRIPTIVE NOTE: 87P. PRICE: $4.00

ABSTRACT: DESCRIBED IS THE DEVELOPMENT OF A SIMPLE, RELATIVELY COMPREHENSIVE METHOD FOR THE RECOVERY OF NONVOLATILE MUTAGENIC COMPOUNDS FROM SURFACE WATER. THE METHOD RECOVERS COMPOUNDS BY SEQUENTIAL PASSAGE OF THE WATER SAMPLE THROUGH A SILICA GEL BED, THEN A CATION-EXCHANGE BED, AND THEN AN ANION-EXCHANGE BED-ALL CONTAINED IN A SINGLE MULTI-BED COLUMN OF GLASS AND TEFLON, THE PARFAIT COLUMN. NONVOLATILE COMPOUNDS NOT ADSORBED TO ANY OF THESE BEDS WERE RECOVERED FOLLOWING CONCENTRATION OF THE COLUMN EFFLUENT BY VACUUM DISTILLATION AT LESS THAN 30 DEGREES.

AVAILABILITY: UNIVERSITY OF ILLINOIS, 2535 HYDROSYSTEMS LAB., WATER RESOURCE CENTER, URBANA, IL 61801

IRIS ACCESSION NUMBER: EW004956

PUBLICATION DATE: SEP 78

TITLE: FLUORIDE REMOVAL FROM POTABLE WATER SUPPLIES.

PERSONAL AUTHOR: SOLLO, FRANK W.; AND OTHERS.

DESCRIPTOR: ACTIVATED CHARCOAL; ADSORPTION; COAGULATION; DENTAL HEALTH; *DRINKING WATER; FLOCCULATION; *FLUORIDE; *FLUORIDE REMOVAL; LABORATORY TECHNIQUES; LABORATORY EQUIPMENT; *POTABLE WATER; PHOSPHORIC ACID; *RESEARCH; *WATER TREATMENT; *WATER QUALITY; *WATER SUPPLY; *WATER RESOURCES

DESCRIPTIVE NOTE: 36P. PRICE: $3.00

ABSTRACT: EXPERIMENTAL RESEARCH WAS CARRIED OUT TO DETERMINE WHETHER OR NOT THE FLUORIDE LEVEL IN WATERS WITH MODERATE FLUORIDE CONTENT COULD BE REDUCED TO ACCEPTABLE LEVELS BY CHEMICAL TREATMENT. EIGHT DIFFERENT CHEMICAL METHODS FOR FLUORIDE REMOVAL WERE TESTED AND COMPARED. COAGULATION WITH ALUM AT PH LEVELS OF 6.2 TO 6.4 WAS ONE OF THE MOST EFFECTIVE METHODS TESTED.

AVAILABILITY: UNIV OF ILLINOIS, 2535 HYDROSYSTEMS LAB., WATER RESOURCES CENTER, URBANA, IL 61801

IRIS ACCESSION NUMBER: EW004957

PUBLICATION DATE: APR 78

TITLE: RAPID ASSESSMENT OF WATER QUALITY USING THE FINGERNAIL CLAM, MUSCULIUM TRANSVERSUM.

PERSONAL AUTHOR: ANDERSON, KEVIN B.; SPARKS, RICHARD E.

DESCRIPTOR: *ANALYTICAL TECHNIQUES; AMMONIA; DISSOLVED OXYGEN; CYANIDE; *FINGERNAIL CLAMS; HEAT; *LABORATORY TECHNIQUES; *MONITORING; METALS; *POLLUTION; *PHYSIOLOGY; *RIVERS; SUSPENDED SOLIDS; SEDIMENTS; WATER RESOURCES; *WATER QUALITY; *WATER POLLUTION CONTROL

DESCRIPTIVE NOTE: 115P. PRICE: $4.50

ABSTRACT: APPARATUS AND METHODS WERE DEVELOPED FOR TESTING THE EFFECTS OF WATER QUALITY FACTORS ON THE CILIARY TREATING RATE OF CLAM GILLS. THE FOLLOWING FACTORS WERE TESTED SINGLY OR IN COMBINATION: POTASSIUM, AMMONIA, LIGHT, TEMPERATURE, DISSOLVED OXYGEN, SODIUM NITRATE, SODIUM SULFATE, CYANIDE, LEAD, ZINC, SUSPENSIONS OF SILICA PARTICLES, SUSPENSIONS OF ILLITE DAY PARTICLES, AND RAW ILLINOIS RIVER WATER. COMPARISON OF THE LEVELS OF THESE WATER QUALITY FACTORS IN THE ILLINOIS AND MISSISSIPPI RIVERS WITH THE LEVELS WHICH HAD DETRIMENTAL EFFECTS ON THE CLAM GILLS SUGGESTS THAT UN-IONIZED AMMONIA AND HEAVY METALS MAY HAVE AFFECTED FINGERNAIL CLAMS IN THE ILLINOIS RIVER IN THE 1950'S AND IN THE MISSISSIPPI RIVER IN 1976-1977.

AVAILABILITY: UNIVERSITY OF ILLINOIS, 2535 HYDROSYSTEMS LAB., WATER RESOURCE CENTER, URBANA, IL 61801

IRIS ACCESSION NUMBER: EW004958

PUBLICATION DATE: 79

TITLE: INCINERATION OF INDUSTRIAL HAZARDOUS WASTES AND SLUDGES.

PERSONAL AUTHOR: SITTIG, MARSHALL.

DESCRIPTOR: *COMBUSTION PROCESSES; DESIGN; *HAZARDOUS WASTES; INCINERATORS; *INCINERATION; *INDUSTRIAL WASTES; *POLLUTION; *PYROLYSIS; *REGULATIONS; *SLUDGE; *SEWAGE; WASTES; *WASTE DISPOSAL

DESCRIPTIVE NOTE: 347P. PRICE: $48.00
ABSTRACT: THIS BOOK DEALS WITH INCINERATION AND RELATED COMBUSTION PROCESSES, SUCH AS PYROLYSIS. IT IS ESPECIALLY DESIGNED TO HELP IN CONFORMING WITH THE REGULATIONS OF THE RESOURCE CONSERVATION AND RECOVERY ACT. IT IS BASED UPON ADVANCED COMPOSITION AND PRODUCTION METHODS DEVELOPED BY INDUSTRIAL TECHNOLOGY TO DEAL WITH HAZARDOUS WASTES AND SLUDGES.

AVAILABILITY: NOYES DATA CORP. NOYES BUILDING., PARK RIDGE, NJ 07656

IRIS ACCESSION NUMBER: EW004959

PUBLICATION DATE: 79

TITLE: LANDFILL DISPOSAL OF HAZARDOUS WASTES AND SLUDGES.

PERSONAL AUTHOR: SITTIG, MARSHALL.

DESCRIPTOR: CONSTRUCTION; DESIGN; ECONOMICS; *HAZARDOUS WASTES; INDUSTRIAL WASTES; *LAND USE; *LANDFILLS; MONITORING; PUBLIC RELATIONS; PUBLIC PARTICIPATION; *REGULATIONS; *SLUDGE; SITE SELECTION; *TOXIC SUBSTANCES; WASTE DISPOSAL

DESCRIPTIVE NOTE: 365P. PRICE $48.00

ABSTRACT: THIS BOOK DEALS WITH LANDFILL TECHNOLOGY AND PROVIDES GUIDELINES FOR THE DISPOSAL OF UNWANTED HAZARDOUS AND TOXIC WASTES. IT IS ESPECIALLY DESIGNED TO HELP IN CONFORMING WITH THE REGULATIONS OF THE RESOURCE CONSERVATION AND RECOVERY ACT. IT IS BASED UPON ADVANCED COMPOSITION AND PRODUCTION METHODS DEVELOPED BY INDUSTRIAL TECHNOLOGY TO DEAL WITH INDUSTRIAL WASTES AND SLUDGES.

AVAILABILITY: NOYES DATA CORPORATION, NOYES BLDG., PARK RIDGE, NJ 07656

IRIS ACCESSION NUMBER: EW004966

PUBLICATION DATE: OCT 73

TITLE: METHODS FOR IDENTIFYING AND EVALUATING THE NATURE AND EXTENT OF NON-POINT SOURCES OF POLLUTANTS.

DESCRIPTOR: *AGRICULTURE; *CONSTRUCTION; *MINING; *MODELS; *NONPOINT POLLUTION; *NONPOINT SOURCES; POLLUTION; PLANNING; *PREDICTION METHODS; *SILVICULTURE; *WATER QUALITY; *WATER POLLUTION CONTROL

DESCRIPTIVE NOTE: 261P. PRICE: $2.45

ABSTRACT: THIS REPORT PROVIDES GENERAL INFORMATION ON METHODS OF IDENTIFYING AND EVALUATING SOURCES OF POLLUTANTS ASSOCIATED WITH AGRICULTURAL, SILVICULTURAL, MINING AND CONSTRUCTION ACTIVITIES. IT IS INTENDED TO ENABLE PLANNERS RESPONSIBLE FOR DEVELOPING REGIONAL WATER QUALITY MANAGEMENT PLANS TO IDENTIFY AND EVALUATE SOURCES OF POLLUTANTS AND THEIR EFFECTS ON WATER QUALITY IN RELEVANT PLANNING AREAS.
AVAILABILITY: SUPERINTENDENT OF DOCUMENTS, U.S. PRINTING OFFICE, WASHINGTON, D.C 20402

IRIS ACCESSION NUMBER: EW004967

PUBLICATION DATE: OCT 73

TITLE: METHODS AND PRACTICES FOR CONTROLLING WATER POLLUTION FROM AGRICULTURAL NONPOINT SOURCES.

DESCRIPTOR: *AGRICULTURE; ANIMAL WASTES; EROSION; *NONPOINT SOURCES; *NONPOINT POLLUTION; *POLLUTION; PESTICIDES; SURFACE RUNOFF; WIND EROSION; WATER EROSION; *WATER POLLUTION CONTROL; WASTE DISPOSAL

DESCRIPTIVE NOTE: 86P. PRICE: $1.10

ABSTRACT: THIS REPORT PROVIDES GENERAL INFORMATION ON ALTERNATIVE WATER POLLUTION CONTROL MEASURES AND CULTURAL PRACTICES. IT IS INTENDED TO PROVIDE INFORMATION THAT, WHEN CONSIDERED IN THE LIGHT OF LOCAL CONDITIONS, WILL GIVE AN INDICATION OF THE KINDS OF MEASURES THAT MAY BE USEFUL IN A PROGRAM TO CONTROL POLLUTANTS FROM AGRICULTURAL ACTIVITIES.

AVAILABILITY: SUPERINTENDENT OF DOCUMENTS, U.S. GOVERNMENT PRINTING OFFICE, WASHINGTON, D.C. 20402

IRIS ACCESSION NUMBER: EW004968

PUBLICATION DATE: 73

TITLE: GROUND WATER POLLUTION FROM SURFACE EXCAVATIONS.

DESCRIPTOR: AQUIFERS; *GROUND WATER; INDUSTRIAL WASTES; LANDFILLS; *PIPES; *POLLUTION; SEPTIC SYSTEMS; SEWERS; *WATER POLLUTION; *WATER QUALITY; WELLS

DESCRIPTIVE NOTE: 220P. PRICE: $2.25

ABSTRACT: PART ONE DEALS WITH IDENTIFYING AND EVALUATING POLLUTION SOURCES. PART TWO DEALS WITH CONTROL METHODS, PROCESSES AND PROCEDURES; THIS SECTION INCLUDES INFORMATION ON CONTROLLING AND MONITORING POLLUTION FROM WELLS AND OTHER SUBSURFACE EXCAVATIONS.

AVAILABILITY: SUPERINTENDENT OF DOCUMENTS, GOVERNMENT PRINTING OFFICE, WASHINGTON, D.C. 20402

IRIS ACCESSION NUMBER: EW004969

PUBLICATION DATE: JAN 74

TITLE: EVALUATION OF SALINITY CREATED BY IRRIGATION RETURN FLOWS.

PERSONAL AUTHOR: JENKE, ARTHUR L.

DESCRIPTOR: *AGRICULTURE; *DRAINAGE; EROSION; INSTRUCTIONAL MATERIALS; *IRRIGATION; IRRIGATION SYSTEMS; *LEACHING; MINERALS; *MANAGEMENT; NONPOINT SOURCE POLLUTION; *SALINITY; SOIL CONSERVATION; WATER RESOURCES; WATER SUPPLY; *WATER POLLUTION CONTROL; *WATER QUALITY

DESCRIPTIVE NOTE: 128P. PRICE: $1.65

ABSTRACT: PRESENTED IS A DISCUSSION OF THE PROBLEM OF SALINITY WHICH OCCURS WHENEVER IRRIGATION IS USED. SALINITY AS WELL AS THE CONCENTRATION OF MINERALS INCREASES IN THE SOIL THROUGH TWO MECHANISMS (1) THE WATER USED IN IRRIGATION CONTAINS DISSOLVED SALTS AND MINERALS WHICH BECOME MORE CONCENTRATED THROUGH EVAPORATION ON ITS WAY TO BEING USED AND (2) THROUGH TRANSPIRATION BY PLANTS WHICH TAKES MOISTURE OUT OF THE SOIL THUS INCREASING THE CONCENTRATION OF SALT LEFT IN THE SOIL. IN ADDITION THE WATER USED TO IRRIGATE ALSO SOAKS THROUGH THE SOIL (CALLED DEEP PERCOLATION) LEACHING OUT SALTS, MINERALS, AND SOLUBLE SOLIDS AS WELL AS FERTILIZERS, PESTICIDES, ORGANIC DEBRIS, COLLOIDS, AND HEAVY METALS WHICH PASS INTO WATERS RECEIVING THIS PERCOLATED WATER. IRRIGATION MAY ALSO WATERLOG THE SOIL OR CAUSE EXCESSIVE SOIL EROSION. THE AREAS OF THIS COUNTRY WHERE SALINITY IS A PARTICULAR PROBLEM ARE PRESENTED AND DISCUSSED. REMEDIAL AND CONTROL MEASURES FOR THESE PROBLEMS ARE ALSO PRESENTED.

AVAILABILITY: SUPERINTENDENT OF DOCUMENTS, GOVERNMENT PRINTING OFFICE, WASHINGTON, DC 20402

IRIS ACCESSION NUMBER: EW004970

PUBLICATION DATE: 74

TITLE: STUDY OF CURRENT AND PROPOSED PRACTICES IN ANIMAL WASTE MANAGEMENT.

PERSONAL AUTHOR: WHETSTONE, GEORGE A. AND OTHERS

DESCRIPTOR: *ANIMAL WASTES; *BIBLIOGRAPHIES; *GAS RECOVERY; LAND APPLICATION; *MANAGEMENT; *RECYCLING; SOIL CONDITIONERS; THERMOCHEMICAL PROCESSING; *WASTE DISPOSAL; *WASTE UTILIZATION

DESCRIPTIVE NOTE: 465P. PRICE: $4.70

ABSTRACT: CURRENT AND PROPOSED PRACTICES IN ANIMAL WASTE UTILIZATION AND/OR DISPOSAL WERE REVIEWED BY MEANS OF A DETAILED SEARCH OF THE LITERATURE, BY CORRESPONDENCE AND BY VISITS WITH ACTIVE INVESTIGATORS IN THE FIELD. ABSTRACTS WERE PREPARED OF 1162 PUBLICATIONS DEALING WITH ANIMAL WASTE UTILIZATION AND/OR DISPOSAL, OR CLOSELY RELATED MATERIALS HAVING A DIRECT CARRY-OVER POTENTIAL. THESE LATTER PUBLICATIONS PERTAINED TO SOME OTHER ASPECT OF MANURE MANAGEMENT OR TO THERMO CHEMICAL PROCESSING OF SOME OTHER ORGANIC MATERIAL. IN ADDITION, ABSTRACTS OF 777 PERTINENT PROJECTS SPONSORED BY THE DEPARTMENT OF AGRICULTURE ARE INCLUDED IN A SEPARATE APPENDIX.

AVAILABILITY: SUPERINTENDENT OF DOCUMENTS, GOVERNMENT PRINTING OFFICE, WASHINGTON, DC 20402

IRIS ACCESSION NUMBER: EW004971

PUBLICATION DATE: OCT 73

TITLE: PROCESSES, PROCEDURES AND METHODS TO CONTROL POLLUTION RESULTING FROM ALL CONSTRUCTION ACTIVITY.

DESCRIPTOR: *CONSTRUCTION; *EROSION CONTROL; NONPOINT SOURCE POLLUTION; *POLLUTION; *POLLUTION CONTROL; PLANNING; *SEDIMENTS; SITE PLANNING; SOIL STABILIZATION;

DESCRIPTIVE NOTE: 230P. PRICE: $2.30

ABSTRACT: THIS REPORT PRESENTS INFORMATION ON PROCESSES, PROCEDURES, AND METHODS FOR CONTROLLING SEDIMENT, STORMWATER, AND POLLUTANTS OTHER THAN SEDIMENT WHICH RESULTS FROM CONSTRUCTION ACTIVITIES. PROCESSES EXAMINED INCLUDE SITE PLANNING, PRELIMINARY SITE EVALUATION AND DESIGN, USE OF PLANNING TOOLS, AND STRUCTURAL AND VEGETATIVE DESIGN CONSIDERATIONS RELATIVE TO DEVELOPMENT OF A WATER POLLUTION ABATEMENT PLAN SUITED TO INDIVIDUAL CONSTRUCTION SITES. METHODS EXAMINED INCLUDE ON-SITE EROSION, SEDIMENT, AND STORM WATER MANAGEMENT, CONTROL STRUCTURES AS WELL AS SOIL STABILIZATION PRACTICES. PROCEDURES AT FEDERAL, STATE, AND LOCAL LEVELS RELATIVE TO THE CONTROL OF LAND DISTURBING ACTIVITIES AND THE INTER-RELATIONS BETWEEN VARIOUS PROCEDURES AND PROCESSES ARE ALSO STUDIED.

AVAILABILITY: SUPERINTENDENT OF DOCUMENTS, GOVERNMENT PRINTING OFFICE, WASHINGTON, DC 20402

IRIS ACCESSION NUMBER: EW004973

PUBLICATION DATE: OCT 78

TITLE: TOOLS AND RULES. FEDERAL ENVIRONMENTAL PROTECTION PROGRAMS.

DESCRIPTOR: AIR POLLUTION; *DRINKING WATER; *FEDERAL LEGISLATION; *FEDERAL PROGRAMS; *FEDERAL REGULATION; FEDERAL STATE RELATIONSHIP; *FEDERAL WATER POLLUTION CONTROL ACT; FUNGICIDES; HAZARDOUS MATERIALS; INSECTICIDES; INSTRUCTIONAL MATERIALS; NOISE POLLUTION; *PUBLIC PARTICIPATION; *SAFE DRINKING WATER ACT; SOLID WASTES; TOXIC SUBSTANCES; *WATER SUPPLY; *WASTEWATER TREATMENT; WATER QUALITY

DESCRIPTIVE NOTE: 67P. PRICE: $3.75

ABSTRACT: THIS MANUAL WAS WRITTEN TO PROVIDE LOCAL OFFICIALS AND INTERESTED CITIZENS WITH AN UNDERSTANDING OF SOME OF THE FEDERAL ENVIRONMENTAL STATUTES AND PROGRAMS WHICH ARE BEING IMPLEMENTED BY STATE AND LOCAL GOVERNMENTS. EMPHASIZED IN THE DISCUSSIONS OF PARTICULAR PROGRAMS IS HOW LOCAL ACTION IN THE FORM OF PUBLIC PARTICIPATION CAN PROVIDE DIRECTION IN THE IMPLEMENTATION AND REGULATION OF A PROGRAM. AMONG THOSE LAWS DISCUSSED AS WELL AS THE RESPECTIVE PROGRAMS TO FULFILL THE INTENTS OF THE LAW ARE THE FOLLOWING: (1) THE CLEAN WATER ACT OF 1977 (PL95-217), (2) THE FEDERAL SAFE DRINKING WATER ACT (PL93-523), (3) THE FEDERAL CLEAN AIR ACT (PL95-396), (4) THE FEDERAL INSECTICIDE, FUNGICIDE, AND RODENTICIDE ACT, AS AMENDED (PL94-140), (5) THE FEDERAL RESOURCE CONSERVATION AND

RECOVERY ACT (PL94-580), (6) THE NOISE CONTROL ACT OF 1972 (PL92-574) AND (7) THE TOXIC SUBSTANCES CONTROL ACT (PL94-469).

AVAILABILITY: SUPERINTENDENT OF DOCUMENTS, GOVERNMENT PRINTING OFFICE, WASHINGTON, DC 20402

IRIS ACCESSION NUMBER: EW004980

PUBLICATION DATE: JUN 80

TITLE: SPECIFYING WATER AND WASTEWATER INSTRUMENTATION FOR CLIENTS.

PERSONAL AUTHOR: GREGG, DONALD T.

DESCRIPTOR: *CONSULTANTS; *DESIGN; *ENGINEERING; ECONOMICS; *EQUIPMENT; *INSTRUMENTATION; *INSTALLATION; *MAINTENANCE; *MEASUREMENT; *WASTEWATER TREATMENT; *WATER TREATMENT; TECHNOLOGY; *WATER RESOURCES; WATER POLLUTION CONTROL

DESCRIPTIVE NOTE: 44-46P.

ABSTRACT: DESCRIBES THE SPECIFICATIONS THAT MUST BE CONSIDERED BY CONSULTANTS WHEN RECOMMENDING INSTRUMENTATION SYSTEM DESIGN AND INSTALLATION. INCLUDES INFORMATION ON MANUFACTURERS INSTALLATION SERVICE, SPECIALITY CONTRACTOR SERVICES, AND ON GENERAL, MECHANICAL AND ELECTRICAL CONTRACTOR SERVICES.

AVAILABILITY: POLLUTION ENGINEERING, V12 N6

IRIS ACCESSION NUMBER: EW004981

PUBLICATION DATE: MAY 80

TITLE: VERSATILE COMPUTER CONTROLS ATLANTA WATER DISTRIBUTION.

PERSONAL AUTHOR: STALLWORTH, T. E.; AND OTHERS

DESCRIPTOR: *COMPUTERS; *DISTRIBUTION SYSTEMS; ENERGY CONSERVATION; DESIGN; *GEORGIA; *MANAGEMENT; *MUNICIPALITIES; *OPERATIONS (WATER); *WATER SUPPLY; *WATER DISTRIBUTION; *WATER RESOURCES; *WATER UTILITIES; WATER POLLUTION CONTROL

DESCRIPTIVE NOTE: 16-19P.

ABSTRACT: ATLANTA'S ENTIRE WATER DISTRIBUTION SYSTEM IS MONITORED BY A MULTI-FUNCTION COMPUTER SYSTEM. THIS ARTICLE REVIEWS THE DEVELOPMENT AND DESIGN OF THIS OPERATIONAL MANAGEMENT TOOL. THE COMPUTER SYSTEM CAN BE USED FOR ENGINEERING HYDRAULIC STUDIES, SYSTEM MODELING AND THE ADDITION OF DIGITAL PLOTTING EQUIPMENT.

AVAILABILITY: WATER AND WASTES ENGINEERING; V17 N5

IRIS ACCESSION NUMBER: EW004982

PUBLICATION DATE: MAY 80

TITLE: INDIRECT WATER REUSE PROBLEMS CAN BE SOLVED AT REASONABLE COSTS.

PERSONAL AUTHOR: CULP, RUSSELL L.

DESCRIPTOR: *COSTS; *INDIRECT WATER REUSE; *PUBLIC HEALTH; POLLUTION; *RECYCLING; *WATER SUPPLY; WASTEWATER TREATMENT; *WATER TREATMENT; *WATER RESOURCES; WASTES DISPOSAL; *WATER UTILITIES; *WATER POLLUTION CONTROL

DESCRIPTIVE NOTE: 20-26P.

ABSTRACT: PRESENTED IS AN ANALYSIS OF THE EFFECTIVENESS AND COSTS OF INDIRECT WATER REUSE. THIS PRACTICE OCCURS WHEN A WATER SUPPLY INTAKE DELIVERS WATER FOR TREATMENT WHICH CONTAINS SOME PORTION OF WASTEWATER THAT WAS DISCHARGED UPSTREAM.

AVAILABILITY: WATER AND WASTES ENGINEERING; V17 N5

IRIS ACCESSION NUMBER: EW004983

PUBLICATION DATE: MAY 80

TITLE: DESIGN TELEMETRY SYSTEMS WITHIN CHANNEL LIMITATIONS.

PERSONAL AUTHOR: FARMER, EDWARD J.
DESCRIPTOR: *COMMUNICATIONS; *COMMUNICATION PROBLEMS; *DESIGN REQUIREMENTS; *ELECTRONIC EQUIPMENT; MONITORING; *SUPERVISION; TELEMETRY; *WATER SUPPLY; *WATER RESOURCES; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 28-30P.

ABSTRACT: ATTENUATION DISTORTION, NOISE AND RESTRICTIONS ON TOTAL SIGNAL POWER LIMIT THE ABILITIES OF VOICEBAND TELEMETRY SYSTEM CHANNELS USED BY THE WATER AND WASTEWATER FIELD FOR SUPERVISORY CONTROL AND MONITORING OF EQUIPMENT. THIS ARTICLE EXAMINES THE PROBLEMS AND FORMULATES SOME POSSIBLE DESIGN SOLUTIONS.

AVAILABILITY: WATER AND WASTES ENGINEERING; V17 N5

IRIS ACCESSION NUMBER: EW004984

PUBLICATION DATE: MAY 80

TITLE: HOW TO COPE WITH THE SDWA/II.

PERSONAL AUTHOR: MACHEMAN, EVERETT L.

DESCRIPTOR: *BACTERIA; *CHEMISTRY; *DATA COLLECTION; LABORATORY PROCEDURES; *MEMBRANE FILTERS; *REGULATIONS; RECORD KEEPING; *WATER TREATMENT; *WATER SUPPLY; *WATER QUALITY; *WATER RESOURCES; WATER UTILITIES

DESCRIPTIVE NOTE: 33-37P.
ABSTRACT: THE FORMS USED BY MOST WATER SUPPLIES IN COMPLYING WITH NATIONAL INTERIM PRIMARY DRINKING WATER REGULATIONS ARE TIME-CONSUMING AND CONFUSING. THIS ARTICLE PRESENTS SIMPLIFIED FORMS FOR RECORDING DATA IN CHEMICAL AND BACTERIOLOGICAL CONTENT USING THE MEMBRANE FILTERS METHOD.

AVAILABILITY: WATER AND WASTES ENGINEERING; V17 N5

IRIS ACCESSION NUMBER: EW004985

PUBLICATION DATE: MAY 80

TITLE: NASSAU COUNTY REMOVES TARGET METALS FORM WASTEWATER.

PERSONAL AUTHOR: GILLEN, BRIAN P.

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *CHEMICAL REACTIONS; FIELD STUDIES; *HEAVY METALS; *INCINERATORS; *LABORATORY PROCEDURES; *METALS; *OPERATIONS (WASTEWATER); SAMPLING; *WASTEWATER TREATMENT; WATER RESOURCES; *WATER POLLUTION CONTROL; WASTE DISPOSAL

DESCRIPTIVE NOTE: 38-39,42,46,51,52

ABSTRACT: THIS ARTICLE DESCRIBES THE PROCEDURE FOR REMOVING HEAVY METALS (EXCLUDING LEAD) FROM PROCESS WATER DISCHARGE OF TWO REFUSE INCINERATOR PLANTS. INCLUDED IS A DESCRIPTION OF THE VARIOUS SAMPLING PROGRAMS AND BENCH SCAB TREATABILITY STUDIES THAT WERE PREFORMED IN ORDER TO REFINE THE REMOVAL PROCEDURE.

AVAILABILITY: WATER AND WASTES ENGINEERING; V17 N5

IRIS ACCESSION NUMBER: EW004986

PUBLICATION DATE: MAY 80

TITLE: ADDITIONAL WATER INCITES COMMUNITY GROWTH.

PERSONAL AUTHOR: NEUBAUER, WALTER K.

DESCRIPTOR: *COMMUNITY DEVELOPMENT; *INDUSTRY; *NEW YORK; *RESERVOIRS; STORAGE; *URBAN AREAS; *WATER STORAGE; *WATER SUPPLY; *WATER RESOURCES; *WATER UTILITIES; WASTE DISPOSAL; *WATER DISTRIBUTION

DESCRIPTIVE NOTE: 60-64P.

ABSTRACT: DESCRIBED IS THE EXTENSIVE WATER TREATMENT, TRANSMISSION, AND STORAGE FACILITIES OF ONONDAGA COUNTY, NEW YORK. THE ARTICLE INDICATES HOW THIS REGIONAL WATER SUPPLY SYSTEM HAS ASSISTED INDUSTRIAL GROWTH AND DEVELOPMENT.

AVAILABILITY: WATER AND WASTES ENGINEERING; V17 N5

IRIS ACCESSION NUMBER: EW004987
PUBLICATION DATE: MAY 80

TITLE: ELIMINATE TASTE AND ODOR PROBLEMS CAUSED BY ALGAE.

PERSONAL AUTHOR: WRIGHT, ROBERT R.

DESCRIPTOR: *ACTIVATED CARBON; *ALGAE; *CHLORINE DIOXIDE; *FLORIDA; MUNICIPALITIES; *ODORS; POLLUTION; *TASTES; *URBAN AREAS; *WATER TREATMENT; *WATER RESOURCES; *WATER POLLUTION CONTROL; *WATER UTILITIES; *WATER QUALITY

DESCRIPTIVE NOTE: 67-69P.

ABSTRACT: DESCRIBED IS HOW LEE COUNTY, FLORIDA, ALLEVIATED TASTE AND ODOR PROBLEMS CAUSED BY ALGAE GROWTH IN THE WATER SUPPLY. SOLVING THE ALGAE PROBLEM INVOLVED USING GRANULAR ACTIVATED CARBON AND CHLORINE DIOXIDE APPLICATION.

AVAILABILITY: WATER AND WASTES ENGINEERING, V17 N5

IRIS ACCESSION NUMBER: EW004988

PUBLICATION DATE: MAY 80

TITLE: INDUSTRIAL WASTE TREATMENT PLANT UPGRADES IN STEPS.

PERSONAL AUTHOR: WRONIEWICZ, VINCENT S.

DESCRIPTOR: CHEMICALS; CONSTRUCTION; DESIGN; *FACILITIES; *INDUSTRY; *LANDFILLS; OPERATIONS (WASTEWATER); *SANITATION; *WASTEWATER TREATMENT; *WATER RESOURCES; *WASTE DISPOSAL

DESCRIPTIVE NOTE: 70-72P.

ABSTRACT: THE TOMS RIVER CHEMICAL CORPORATION DECIDED TO EXPAND AND UPGRADE ITS INDUSTRIAL WASTE TREATMENT FACILITIES, BECAUSE OF PROJECTED PRODUCTION INCREASES AND STRICTER FEDERAL AND STATE EFFLUENT REGULATIONS. DESCRIBES THE INCREMENTAL ADDITION OF PRIMARY AND SECONDARY CLARIFIERS, AERATION BASINS AND A NEW LANDFILL WITH DUAL IMPERMEABLE LINERS.

AVAILABILITY: WATER AND WASTES ENGINEERING; V17 N5

IRIS ACCESSION NUMBER: EW004989

PUBLICATION DATE: JUN 80

TITLE: GEORGIA UNIVERSITY TEAM DEVELOPS WATER SYSTEMS GUIDE.

PERSONAL AUTHOR: DEBO, THOMAS N.; WANNING, HELEN

DESCRIPTOR: COSTS; *DESIGN; EQUIPMENT; *FACILITIES; FINANCES; GEORGIA; *HANDBOOKS; *OPERATIONS (WATER); PLANNING; WATER SYSTEMS; *WATER TREATMENT

DESCRIPTIVE NOTE: 79-83P.

ABSTRACT: THIS ARTICLE DISCUSSES A COORDINATED EFFORT BY THREE GEORGIA UNIVERSITIES TO PREPARE A GUIDE FOR WATER SYSTEM PLANNING AND IMPROVEMENT. THE GUIDE IS INTENDED TO HELP LOCAL OFFICIALS ANALYZE FUTURE LARGE-SCALE CAPITAL IMPROVEMENTS OR EXPANSION OF PUBLICALLY-OWNED WATER SYSTEMS. THE GUIDE CAN BE USED TO ASSIST LOCAL GOVERNMENT OFFICIALS IN UNDERSTANDING THE GENERAL ASPECTS OF WATER SYSTEM DESIGN AND PLANNING, BECOMING INFORMED ABOUT RELEVANT ENVIRONMENTAL REGULATIONS, ESTIMATING THE COST OF CONSTRUCTION AND OPERATION OF A NEW OR EXPANDED WATER SYSTEM, SELECTING AND PLANNING LONG RANGE FINANCIAL OPTIONS TO MEET CONSTRUCTION AND OPERATION COSTS, AND ANALYZING THE PERFORMANCE OF WATER SYSTEMS.

AVAILABILITY: PUBLIC WORKS; V3 N6

IRIS ACCESSION NUMBER: EW004990

PUBLICATION DATE: JUN 80

TITLE: DEVELOPING A COST-EFFECTIVE SLUDGE MANAGEMENT APPROACH.

PERSONAL AUTHOR: SCROGGIN, CHARLES R.; AND OTHERS

DESCRIPTOR: COMPOSTING; *COST BENEFIT ANALYSIS; *COST EFFECTIVENESS; DESIGN; ENERGY USE; KENTUCKY; *LAND APPLICATION; LANDFILL; *LAND USE; PLANNING; *SLUDGE DISPOSAL; SLUDGE; *WASTE DISPOSAL; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 87-91P.

ABSTRACT: THIS ARTICLE REPORTS ON EFFORTS BY WASTEWATER TREATMENT PLANNERS TO IDENTIFY THE MOST COST-EFFECTIVE APPROACH TO SLUDGE MANAGEMENT AT A KENTUCKY PLANT. KEY TASKS INVOLVED WERE REVIEW OF EXISTING CONDITIONS AND PREVIOUSLY ESTABLISHED DESIGN CRITERIA, EVALUATION OF FEASIBLE SLUDGE PROCESSING AND DISPOSAL TECHNIQUES, AND SELECTION OF SYSTEMS FOR A DETAILED COST-EFFECTIVE ANALYSIS. THE FOUR SLUDGE MANAGEMENT ALTERNATIVES WERE: LAND APPLICATION, LANDFILLING, COMPOSTING, AND INCINERATION. COMPOSTING WAS FOUND TO BE THE LOWEST TOTAL PRESENT WORTH COST WHILE LAND APPLICATION WAS THE LEAST ENERGY CONSUMING ALTERNATIVE. THE REPORT CONCLUDED THAT IF IN THE CASE THAT COMPOSTING IS NOT CONSIDERED ACCEPTABLE, LONG-TERM LAND APPLICATION AT THE TREATMENT PLANT SITE PROVES INFEASIBLE, AND LANDFILLING IS NO LONGER AUTHORIZED BY THE STATE, LOCAL GOVERNMENT MAY PURCHASE ADDITIONAL LAND AND CONTINUE A LAND APPLICATION PROGRAM.

AVAILABILITY: PUBLIC WORKS; V3 N6

IRIS ACCESSION NUMBER: EW004991

PUBLICATION DATE: JUNE 80

TITLE: FINDING THE RIGHT RX FOR TASTES AND ODORS.

PERSONAL AUTHOR: BARNHART, DALE R.

DESCRIPTOR: *ALGAE; CASE STUDIES; CHLORINATION; COPPER SULFATE; *ODORS; *OPERATIONS (WATER); POTASSIUM PERMANGANATE; *TASTES; *WATER QUALITY; *WATER TREATMENT

DESCRIPTIVE NOTE: 95-96P.

ABSTRACT: A CASE STUDY OF HOW ONE PRIVATE WATER UTILITY COMPANY APPROACHED THE PROBLEM OF BAD ODORS AND TASTE IN THEIR DRINKING WATER SYSTEM IS PRESENTED IN THIS ARTICLE. DISCUSSION INCLUDES THE USE OF COPPER SULFATE, POTASSIUM PERMANGANATE, AND SUPER CHLORINATION FOR TREATING THE VARIOUS TYPES OF ALGAL BLOOMS. A TABLE OF ALGAE ASSOCIATED TASTES AND ODORS, AND TREATMENT IS INCLUDED.

AVAILABILITY: PUBLIC WORKS, V3 N6

IRIS ACCESSION NUMBER: EW004992

PUBLICATION DATE: JUN 80

TITLE: CATCH BASIN CLEANING PROGRAM REDUCES FLOODING COMPLAINTS.

PERSONAL AUTHOR: HURLBERT, DONALD

DESCRIPTOR: *CATCH BASINS; COST EFFECTIVENESS; *FLOOD PREVENTION; KANSAS CITY; *MAINTENANCE; *PREVENTIVE MAINTENANCE; PUBLIC WORKS; STORMWATER; *STORM SEWERS; *SEWERS; *SURFACE RUNOFF

DESCRIPTIVE NOTE: 98-99P.

ABSTRACT: THIS ARTICLE REPORTS ON HOW THE CITY OF KANSAS CITY HAS IMPLEMENTED A PREVENTIVE MAINTENANCE PROBLEM OF PERIODICALLY CLEANING OUT THE CITY'S CATCH BASINS TO ALLEVIATE FLOODING DURING HEAVY RAINS. A PROCESS OF DIGGING DEBRIS OUT OF INLETS AND BACK-FLUSHING DISCHARGE LINES WITH HIGH PRESSURE WATER JETS HAS BEEN SUCCESSFUL IN SAVING THE CITY MONEY AND IMPROVING PUBLIC IMAGE.

AVAILABILITY: PUBLIC WORKS; V3 N6

IRIS ACCESSION NUMBER: EW004993

PUBLICATION DATE: JUN 80

TITLE: HOW TO CONDUCT A GAC ORGANICS REMOVAL PILOT STUDY.

PERSONAL AUTHOR: FISHER, JAMES L.

DESCRIPTOR: *ACTIVATED CARBON; *DRINKING WATER; FACILITIES; *GRANULAR ACTIVATED CARBON; LABORATORY TECHNIQUES; *LABORATORY TESTS; *PILOT STUDIES; POTABLE WATER; TRACE ORGANICS; WATER POLLUTION CONTROL; *WATER TREATMENT

DESCRIPTIVE NOTE: 100-102P.

ABSTRACT: THIS ARTICLE DISCUSSES GRANULAR ACTIVATED CARBON USE IN WATER TREATMENT PLANTS AND EXPLAINS THE PROCEDURE FOR AN ON-SITE PILOT COLUMN TEST. EXAMINED ARE: STANDARD GAC ADSORPTION ISOTHERM, ON-SITE PILOT GAC SYSTEMS, PILOT COLUMN

DESIGN CRITERIA, SELECTION OF MATERIALS, SYSTEM PREPARATION, SYSTEM OPERATION, AND DATA INTERPRETATION.

AVAILABILITY: PUBLIC WORKS, V3 N6

IRIS ACCESSION NUMBER: EW004994

PUBLICATION DATE: JUN 80

TITLE: DO-IT-YOURSELF PROGRAM FOR WATER MAIN REPLACEMENT.

DESCRIPTOR: CASE STUDIES; *COST EFFECTIVENESS; *MAINTENANCE; NEW YORK; *PIPES; *WATER MAINS

DESCRIPTIVE NOTE: 107P.

ABSTRACT: ONE CITY'S SUCCESSFUL ATTEMPT AT REPLACING ITS WATER LINES UTILIZING ITS OWN MAINTENANCE CREWS, IS REPORTED ON IN THIS ARTICLE. TONAWANDA, NEW YORK REPORTS A CONSIDERABLE COST SAVINGS IN UNDERTAKING THIS TASK THEMSELVES RATHER THAN HIRING AN OUTSIDE CONTRACTOR, WITH MONEY SAVED GOING TO ADDING NEW PEOPLE AND EQUIPMENT TO THEIR MAINTENANCE DEPARTMENT.

AVAILABILITY: PUBLIC WORKS; V3 N6

IRIS ACCESSION NUMBER: EW004995

PUBLICATION DATE: JUN 80

TITLE: WATER FILTER DESIGN: WHAT TO LOOK FOR IN THE EIGHTIES.

PERSONAL AUTHOR: GROVER, KATHRYN

DESCRIPTOR: *DESIGN; ENGINEERING; *FILTRATION; PILOT PROJECTS; *RESEARCH; *WATER TREATMENT; *WATER SUPPLY; WATER RESOURCES

DESCRIPTIVE NOTE: 39-43P.

ABSTRACT: DESCRIBES RECENT RESEARCH AND PILOT PROJECTS THAT ARE CONCERNED WITH WATER FILTER BED DESIGN. THE EFFECTS OF SIZE AND SHAPE OF THE FILTER BOX, AND THE GRADATION AND DEPTH OF MEDIA ARE EXAMINED IN DETAIL. THE RESULTS ARE ANALYZED TO DESIGN A WATER PURIFICATION SYSTEM OF MAXIMUM EFFICIENCY AND EFFECTIVENESS.

AVAILABILITY: AMERICAN CITY AND COUNTY; V95 N6

IRIS ACCESSION NUMBER: EW004996

PUBLICATION DATE: JUN 80

TITLE: EBMUD: AWARD WINNING SEWAGE WORKS.

DESCRIPTOR: *ACTIVATED SLUDGE; CONSTRUCTION; *DESIGN; *FACILITIES; *OPERATIONS (WASTEWATER); *OXYGEN ACTIVATED SLUDGE; POLLUTION; *SLUDGE; *TECHNOLOGY; UTILITIES; *WATER POLLUTION CONTROL; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 47-48P.

ABSTRACT: DESCRIPTION OF THE DESIGN AND OPERATION OF EAST BAY MUNICIPAL UTILITY DISTRICTS. OXYGEN-ACTIVATED SLUDGE WATER POLLUTION CONTROL PLANT. THE TREATMENT FACILITIES WERE NAMED AS CALIFORNIA'S OUTSTANDING CIVIL ENGINEERING ACHIEVEMENT FOR 1978. THE PLANT MEETS FEDERAL AND STATE DISCHARGE REQUIREMENTS, AND ALSO RECYCLES TREATED EFFLUENT FOR IN-PLANT USE.

AVAILABILITY: AMERICAN CITY AND COUNTY; V95 N6

IRIS ACCESSION NUMBER: EW004997

PUBLICATION DATE: JUN 80

TITLE: LABORATORY MEASUREMENT OF SEDIMENT BY TURBIDITY.

PERSONAL AUTHOR: WARD, PETER R. B.

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *LABORATORY PROCEDURES; *MEASUREMENT INSTRUMENTS; *SEDIMENTS; *TURBIDITY; *WATER QUALITY; *WATER POLLUTION CONTROL

DESCRIPTIVE NOTE: 1041-1053P.

ABSTRACT: A METHOD IS DESCRIBED FOR THE LABORATORY DETERMINATION OF SUSPENDED SEDIMENT CONCENTRATIONS USING A TURBIDITY METER. THE EFFECT OF PARTICLE SIZE AND CALIBRATION IS ANALYZED, AND IT IS SHOWN THAT ALTHOUGH THE SENSITIVITY VARIES BY A LARGE FACTOR WITH CHANGING PARTICLE SIZE THE METHOD IS SATISFACTORY.

AVAILABILITY: JOURNAL OF THE HYDRAULICS DIVISION; V106 N8

IRIS ACCESSION NUMBER: EW004998

PUBLICATION DATE: JUN 80

TITLE: DESIGN HYETOGRAPHS FOR SMALL DRAINAGE STRUCTURES.

PERSONAL AUTHOR: YEN, BEN CHIE; CHOW, VEN TE

DESCRIPTOR: CIVIL ENGINEERING; *DESIGN, *FLOOD CONTROL; *HYDRAULICS; *PREDICTIVE MEASUREMENT; *RAINFALL; STATISTICAL ANALYSIS; *SURFACE RUNOFF; *URBAN AREAS; *WATER RESOURCES

DESCRIPTIVE NOTE: 1055-1076P.

ABSTRACT: DESCRIBES A NEW METHOD FOR ACCURATELY PREDICTING THE DESIGN HYETOGRAPHS OF FUTURE STORMS. THE NON DIMENSIONAL TRIANGULAR HYETOGRAPH METHOD IS BASED ON THE STATISTICAL MEAN OF THE FIRST TIME MOMENT OF RECORDED RAINSTORMS AND TRIANGULAR REPRESENTATION OF THE HYETOGRAPHS, WHICH ARE NONDIMENSIONALIZED USING THE RAINFALL DURATION AND DEPTH.

AVAILABILITY: JOURNAL OF THE HYDRAULICS DIVISION; V106 N8

IRIS ACCESSION NUMBER: EW004999

PUBLICATION DATE: JUL 80

TITLE: IMPACT OF SEWER MORATORIA ON THE BUILDING INDUSTRY.

PERSONAL AUTHOR: JOHNSON, DAVID E.

DESCRIPTOR: *BUILDINGS; *CONSTRUCTION; *INDUSTRY; LEGISLATION; *REGULATIONS; *SEWERS; *WASTEWATER COLLECTION; *WASTE DISPOSAL; WASTES

DESCRIPTIVE NOTE: 48-50P.

ABSTRACT: A SEWER MORATORIUM CONSISTS OF A BLANKET DENIAL OF ADDITIONAL SERVICE CONNECTIONS TO EXISTING SEWAGE SYSTEMS AS THEY ARE HANDLING MAXIMIUM CAPACITY. THE ARTICLE CONSIDERS HOW BUILDING ACTIVITY HAS VIRTUALLY CEASED IN CERTAIN AREAS RESULTING IN SHIFTS IN BUILDING ACTIVITY, INCREASED LOT SIZES AND INCREASED LAND LOT PRICES.

AVAILABILITY: PUBLIC WORKS, VIII N7

IRIS ACCESSION NUMBER: EW005000

PUBLICATION DATE: JUL 80

TITLE: PROBLEMS OF CORROSION CONTROL IN WATER DISTRIBUTION SYSTEMS.

PERSONAL AUTHOR: APPLEGATE, LINDSEY M.
DESCRIPTOR: *CALIFORNIA; *COSTS; *CHEMICAL REACTIONS; *ENGINEERING; *METALS; *CORROSION CONTROL; *DISTRIBUTION SYSTEMS; CATHODIC PROTECTION; *PIPES; *UTILITIES; *WATER RESOURCES; *WATER DISTRIBUTION

DESCRIPTIVE NOTE: 54-56P.

ABSTRACT: THE WATER SYSTEM OF THERMALITO IRRIGATION DISTRICT IN OROVILLE, CALIFORNIA, PROVIDES A GOOD EXAMPLE OF CORROSION CONTROL PROBLEMS. THE SYSTEM EMPLOYS CATHODIC PROTECTION ILLUSTRATED BY THE THERMALITO SYSTEM, AND EMPLOYS UNIQUE, LIMITED AND AGGRESSIVE ENGINEERED METHODS. THE RESULTS ARE ONLY PARTIAL AND IN SOME RESPECTS HAVE NOT ATTAINED PERFECTION.

AVAILABILITY: PUBLIC WORKS, V111 N7

IRIS ACCESSION NUMBER: EW005001

PUBLICATION DATE: JUL 80

TITLE: REVEGETATION PROJECT UTILIZES SLUDGE.

DESCRIPTOR: METALS; *REVEGETATION; *SLUDGE; RECLAMATION; WASTE UTILIZATION; TAILINGS; *SOIL CONSERVATION; SITE DEVELOPMENT; *WASTES; *WASTE DISPOSAL

DESCRIPTIVE NOTE: 67-68P.

ABSTRACT: DESCRIBES SLUDGE-BARED REVEGETATION OF MINE TAILINGS IN CENTRAL COLORADO. ROCK WASTE, WASTEWATER TREATMENT PLANT SLUDGE AND WOOD CHIPS WERE USED DURING RECLAMATION. VEGETATION PROGRESS HAS SURPASSED ALL EXPECTATIONS AND ENVIRONMENTAL CONTROL ENGINEERS ANTICIPATE THAT THE SOIL WILL REACH SELF-RENEWING MATURITY WITHIN 15 TO 20 YEARS.

AVAILABILITY: PUBLIC WORKS, V111 N7

IRIS ACCESSION NUMBER: EW005002

PUBLICATION DATE: JUL 80

TITLE: DESIGNING FOR FORCE MAIN ODOR CONTROL.

PERSONAL AUTHOR: VIVONA, MORRIS A.

DESCRIPTOR: *DESIGN; *ODOR CONTROL; *AIR INJECTION; OXYGEN; ENZYMES; *WASTEWATER TREATMENT; POLLUTION; TEMPERATURE; *UTILITIES; *WASTES; *WASTE DISPOSAL

DESCRIPTIVE NOTE: 74-76P.

ABSTRACT: CONSIDERED ARE ITEMS TO BE CONSIDERED WHEN DESIGNING A SYSTEM FOR ODOR CONTROL BY FORCE MAIN AIR INJECTION. WITH INJECTION, DEPENDENCE IS PLACED ON REACTION RATE, WHICH ASSURES OXYGEN UPTAKE FROM AIR. VARIABLES INVOLVED ARE TEMPERATURE, ENZYME LAG, CARBANACEOUS AND NITROGENOUS BIOCHEMICAL OXYGEN DEMAND, AND SULFATE AND SULFIDE EQUILIBRIA.
AVAILABILITY: PUBLIC WORKS, V111 N7

IRIS ACCESSION NUMBER: EW005003

PUBLICATION DATE: JUN 80

TITLE: HOW SAFE ARE YOUR SEWAGE WET WELLS?

PERSONAL AUTHOR: CARPENTER, REED H.; CASS, LEONARD

DESCRIPTOR: *ACCIDENT PREVENTION; ELECTRICAL SYSTEMS; *SEWAGE WET WELLS; EXPLOSIVE GASES; *WASTEWATER TREATMENT; PUMP MOTORS; *SAFETY; *WASTE DISPOSAL

DESCRIPTIVE NOTE: 16-18,21P.

ABSTRACT: THIS PAPER DEBATES THE HAZARDS ASSOCIATED WITH SEWAGE WET WELLS, AND WHETHER EXPLOSION-PROOF EQUIPMENT IS WARRANTED.

AVAILABILITY: WATER 8 WASTES ENGINEERING, V17 N6

IRIS ACCESSION NUMBER: EW005004

PUBLICATION DATE: JUN 80

TITLE: REDUCE LAGOON ALGAE PROBLEMS WITH COAGULANTS.

PERSONAL AUTHOR: CULLINANE, JOHN M., SHAFER, RICHARD A.

DESCRIPTOR: *CHEMICAL REACTIONS; COST EFFECTIVENESS; *WASTEWATER TREATMENT; *LAGOONS; *ALGAE; COAGULANTS; ALUM; WATER QUALITY; *UTILITIES; *WASTE DISPOSAL; *WASTES; *WATER POLLUTION CONTROL

DESCRIPTIVE NOTE: 19-21P.

ABSTRACT: PHOSPHORUS, CHEMICAL OXYGEN DEMAND, AND SUSPENDED SOLIDS CONCENTRATIONS DUE TO ALGAL BLOOMS CAN BE SIGNIFICANTLY LOWERED PRIOR TO WASTEWATER DISCHARGE FROM SMALL LAGOONS BY THE ADDITION OF ALUM. THE ALUM COAGULATES, FLOCCULATES AND SETTLES THE ALGAL MASS WHICH IS THEN STORED AS SLUDGE ON THE LAGOON BOTTOM.

AVAILABILITY: WATER 8 WASTES ENGINEERING, V17 N6

IRIS ACCESSION NUMBER: EW005005

PUBLICATION DATE: JUN 80

TITLE: FLUIDIZED BEDS IMPROVE TREATMENT, CUT COSTS.

PERSONAL AUTHOR: BARBARA, MICHAEL, AND OTHERS
DESCRIPTOR: *COST EFFECTIVENESS; *WASTEWATER TREATMENT; *FLUIDIZED BEDS; SLUDGE; BIOLOGICAL TREATMENT; TECHNOLOGY; *UTILITIES; *WASTE DISPOSAL; WASTES

DESCRIPTIVE NOTE: 35-37P.

ABSTRACT: FLUIDIZED BED TECHNOLOGY COMBINES THE BEST FEATURES OF BOTH TRICKLING FILTERS AND ACTIVATED SLUDGE SUSPENDED GROWTH SYSTEMS, NAMELY, FIXED BIOLOGICAL FILM ATTACHMENT, AND HIGH BIOMASS CONCENTRATIONS. IT CAN LOWER SLUDGE HANDLING AND CHEMICAL COSTS AS IT MAXIMIZES BIOLOGICAL WASTE TREATMENT EFFICIENCY.

AVAILABILITY: WATER 8 WASTES ENGINEERING, V17 N6

IRIS ACCESSION NUMBER: EW005006

PUBLICATION DATE: JUN 80

TITLE: WELL SOLVES WATER SHORTAGE, PRESERVES SCENIC RIVER.

PERSONAL AUTHOR: LUEBKE, TED, COWDEN, CECIL L.

DESCRIPTOR: *CONSERVATION (ENVIRONMENT); *DESIGN; ENVIRONMENT; UTILITIES; *URBAN AREAS; *WATER SUPPLY; *WATER RESOURCES; *WATER WELLS; *WASHINGTON

DESCRIPTIVE NOTE: 40-41P.

ABSTRACT: DESCRIBES HOW THE UNDER-RIVER COLLECTOR WELL IN MARYSVILLE, WASHINGTON IS FLEXIBLE, ACCESSIBLE, AND UNOBTRUSIVE. IT PROVIDES NEEDED WATER TO THE CITY WITHOUT PROVIDING ENVIRONMENTAL OR AESTHETIC PROBLEMS AS WELL.

AVAILABILITY: WATER 8 WASTES ENGINEERING, V17 N6

IRIS ACCESSION NUMBER: EW005007

PUBLICATION DATE: JUN 80

TITLE: COOPERATION FORMS FOUNDATION FOR WWTP GROWTH.

PERSONAL AUTHOR: MOORE, ROBERT C.

DESCRIPTOR: *CONSTRUCTION; *ENGINEERING; *FACILITIES; INDUSTRIAL WASTES; MUNICIPALITIES; *FLOOD CONTROL; LEVEES; *WASTEWATER TREATMENT; *SECONDARY TREATMENT; *UTILITIES; *WATER RESOURCES; *WATER DISPOSAL; WASTES

DESCRIPTIVE NOTE: 44-47P.

ABSTRACT: DESCRIBES HOW SECONDARY WASTEWATER TREATMENT FACILITIES WERE CONDUCTED TO SUPPLEMENT A PRIMARY TREATMENT PLANT AND ALSO COMBINED WITH A PORTION OF FLOOD CONTROL LEVELS. THE REASONS FOR THIS JOINT VENTURE WERE THE LACK OF AVAILABLE LAND AND THE FACT THAT THE INCOMING WASTES WERE HIGHLY INDUSTRIAL.

AVAILABILITY: WATER 8 WASTES ENGINEERING, V17 N6

IRIS ACCESSION NUMBER: EW005008

PUBLICATION DATE: JUL 80

TITLE: LINEAR THEORY METHODS FOR PIPE NETWORK ANALYSIS.

PERSONAL AUTHOR: ISAACS, LEWIS T.; MILLS, KEVIN G.

DESCRIPTOR: *ANALYTICAL TECHNIQUES; CIVIL ENGINEERING; *FLUID FLOW; *FLUID MECHANICS; *HYDRAULICS; *PIPES; *WATER DISTRIBUTION; *WATER SUPPLY

DESCRIPTIVE NOTE: 1191-1201P.

ABSTRACT: PRESENTS PREVIOUSLY UNPUBLISHED NUMERICAL METHODS FOR THE STEADY-STATE SOLUTION OF THE FLOW DISTRIBUTION IN A PIPE NETWORK. IT RELIES ON AN ITERATIVE LINEARIZATION PROCEDURE TO SOLVE FOR JUNCTION HEADS, AND IS HIGHLY SUITED FOR USE ON SMALL COMPUTERS. THE RELATIONSHIPS TO OTHER SOLUTION METHODS ARE EXPLICITLY DEVELOPED.

AVAILABILITY: JOURNAL OF THE HYDRAULICS DIVISION, V106 N7

IRIS ACCESSION NUMBER: EW005010
PUBLICATION DATE: JUL 80

TITLE: ECONOMIC MODEL FOR RESERVOIR PLANNING.

PERSONAL AUTHOR: MOORE, NANCY YOUNG; YEH, WILLIAM W. G.

DESCRIPTOR: *CALIFORNIA; *ECONOMIC MODELS; *ECONOMICS; *MODELS; *OPERATIONS; *PLANNING; *RESERVOIRS; *WATER SUPPLY; *WATER RESOURCES

DESCRIPTIVE NOTE: 383-400P.

ABSTRACT: THE MODEL'S OBJECTIVE IS TO MAXIMIZE NET ECONOMIC EFFICIENCY BENEFITS SUBJECT TO HYDROLOGIC SYSTEM CONSTRAINTS. OPTIMIZATION INCORPORATES AN OPERATING SCHEME AND A DEMAND CURVE WHICH IS SENSITIVE TO PRICE AND TIME CHANGES. THE MODEL IS TESTED WITH AN APPLICATION TO A RIVER PROJECT IN CALIFORNIA.

AVAILABILITY: JOURNAL OF THE WATER RESOURCES PLANNING AND MANAGEMENT DIVISION; V106 N2

IRIS ACCESSION NUMBER: EW005011

PUBLICATION DATE: JUL 80

TITLE: BAYESIAN ANALYSIS OF ENERGY PRICES ON IRRIGATION.

PERSONAL AUTHOR: MCANIFF, RICHARD J.; AND OTHERS

DESCRIPTOR: AGRICULTURE; *COSTS; *DECISION MAKING; *ENERGY CONSERVATION; *IRRIGATION; *OPERATING EXPENSES; *WATER RESOURCES

DESCRIPTIVE NOTE: 401-408P.

ABSTRACT: RECENT INCREASES IN THE PRICE OF ENERGY FOR PUMPING WATER AND DECLINING AQUIFERS HAVE RESULTED IN A REEVALUATION OF IRRIGATION SYSTEMS, TECHNIQUES, AND PRACTICES TO OPTIMIZE ENERGY EFFICIENCY. THE AUTHOR SUGGESTS UTILIZING A DECISION FRAMEWORK BASED ON BAYESIAN DECISION THEORY, TO SELECT OPTIMAL IRRIGATION SYSTEMS.

AVAILABILITY: JOURNAL OF THE WATER RESOURCES PLANNING AND MANAGEMENT DIVISION; V106 N2

IRIS ACCESSION NUMBER: EW005012

PUBLICATION DATE: JUL 80

TITLE: DETENTION STORAGE FOR URBAN FLOOD CONTROL.

PERSONAL AUTHOR: SMITH, DAVID P.; BEDIENT, PHILIP B.

DESCRIPTOR: *DESIGN; *DRAINAGE; *FLOOD CONTROL; HYDROLOGY; *LAND USE; *MODELS; *PLANNING; SIMULATIONS; *URBAN AREAS; *WATERSHEDS; *WATER RESOURCES; *WATER STORAGE

DESCRIPTIVE NOTE: 413-425P.
ABSTRACT: A METHOD FOR EVALUATING EFFECTS OF DETENTION STORAGE IN URBAN WATERSHEDS IS PRESENTED. A STORAGE DETENTION MODEL WAS USED ALONG WITH EMPERICAL UNIT HYDROGRAMS IN A CORPS OF ENGINEERS MODEL TO PREDICT DESIGN FLOWS FOR BOTH EXISTING LAND USE AND PROJECTED FUTURE DEVELOPMENTS.

AVAILABILITY: JOURNAL OF THE WATER RESOURCES PLANNING AND MANAGEMENT DIVISION; V106 N2

IRIS ACCESSION NUMBER: EW005013

PUBLICATION DATE: JUL 80

TITLE: MINIMIZING TREATMENT COSTS IN MULTIPLANT SETTINGS.

PERSONAL AUTHOR: PEIRCE, J. JEFFREY; AND OTHERS

DESCRIPTOR: *COSTS; CONTRACTS; ECONOMICS; *ENGINEERING; FACILITIES; *MANAGEMENT; *MUNICIPALITIES; *OPERATING EXPENSES; *PLANNING; *REGIONAL PLANNING; *WASTE DISPOSAL; WATER POLLUTION CONTROL; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 427-438P.

ABSTRACT: METHODS FOR DERIVING LEAST COST OPERATING SCHEDULES FOR WASTEWATER TREATMENT FACILITIES ARE DEVELOPED AND COMPARED. TREATMENT COST SAVINGS ARE ACHIEVED THROUGH THE PROXY REGIONAL TREATMENT CONTRACTS ADVOCATED BY THIS APPROACH. A CASE STUDY OF PHOSPHORUS REVOVAL IN WISCONSIN'S LAKE MICHIGAN WATERSHED IS PRESENTED.

AVAILABILITY: JOURNAL OF THE WATER RESOURCES PLANNING AND MANAGEMENT DIVISION; V106 N2.

IRIS ACCESSION NUMBER: EW005014

PUBLICATION DATE: 80

TITLE: WATER SUPPLY AND TREATMENT: RAW WATER PREPARATION.

DESCRIPTOR: COLOR; MICROBIOLOGY; ODORS; *OPERATIONS (WATER TREATMENT); *PUBLIC HEALTH; POLLUTION; TASTES; TURBIDITY; *WATER SUPPLY; WATER TREATMENT; *WATER RESOURCES; *WATER UTILITIES; *WATER POLLUTION CONTROL; SEDIMENTATION

DESCRIPTIVE NOTE: C-2-10P.

ABSTRACT: DESCRIBED ARE WATER TREATMENT TECHNIQUES TO MEET THE STANDARD REQUIREMENTS FOR WATER TURBIDITY, COLOR, ODOR AND MICRO-ORGANISM CONCENTRATION. THE TREATMENT TECHNIQUES FOR SURFACE WATERS INCLUDE SCREENING, COAGULATION, FLOCCULATION, AND SEDIMENTATION. THESE TECHNIQUES MAY ALSO BE APPLICABLE IN THE TREATMENT OF GROUNDWATER, DEPENDING ON THE NATURE AND CONCENTRATION OF IMPURITIES PRESENT.

AVAILABILITY: 1980 PUBLIC WORKS MANUAL - PUBLIC WORKS JOURNAL CORPORATION, 200 SOUTH BROAD STREET, RIDGEWOOD, NJ

07451

IRIS ACCESSION NUMBER: EW005015

PUBLICATION DATE: 80

TITLE: WATER SUPPLY AND TREATMENT: FILTRATION.

DESCRIPTOR: *FILTRATION; *OPERATIONS (WATER); *PUBLIC HEALTH; *WATER TREATMENT; *WATER SUPPLY; *WATER POLLUTION CONTROL

DESCRIPTIVE NOTE: C-10-15P.

ABSTRACT: PRESENTED IS A DETAILED DISCUSSION OF THE FILTRATION PROCESS IN WATER TREATMENT. EXAMINED ARE VARIOUS METHODS WHICH USE A VARIETY OF GRANULAR FILTRATION MEDIA--SAND, ANTHRACITE COAL, GRANULAR ACTIVATED CARBON, GRAPHITE, GARNET, GRAVEL AND COMBINATIONS. ANALYZED IS THE EFFECTIVENESS OF GRAVITY AND PRESSURIZED FILTRATION SYSTEMS.

AVAILABILITY: 1980 PUBLIC WORKS MANUAL - PUBLIC WORKS JOURNAL CORPORATION, 200 SOUTH BROAD STREET, RIDGEWOOD, NJ 07451

IRIS ACCESSION NUMBER: EW005016

PUBLICATION DATE: 80

TITLE: WATER SUPPLY AND TREATMENT: SOFTENING, IRON AND MANGANESE REMOVAL.

DESCRIPTOR: *IRON; LEGISLATION; *MANGANESE; *METALS; MINERALS; *OPERATIONS (WATER); PUBLIC HEALTH; *SOFTENING; SLUDGE; *WATER SOFTENING; *WATER SUPPLY; *WATER TREATMENT; *WATER RESOURCES; *WATER UTILITIES; *WATER POLLUTION CONTROL

DESCRIPTIVE NOTE: C-15-21P.

ABSTRACT: EXAMINED ARE ASPECTS OF WATER TREATMENT THAT RELATE TO THE MINERAL CONTENT OF WATER. INCLUDED ARE SECTIONS ON LIMITING CONCENTRATIONS, SOFTENING, DESALTING TECHNIQUES, FLORIDE ADJUSTMENT AND REMOVING IRON AND MANGANESE.

AVAILABILITY: 1980 PUBLIC WORKS MANUAL - PUBLIC WORKS JOURNAL CORPORATION, 200 SOUTH BROAD STREET, RIDGEWOOD, NJ 07451

IRIS ACCESSION NUMBER: EW005017

PUBLICATION DATE: 80

TITLE: WATER SUPPLY AND TREATMENT: DISINFECTION, TASTE, AND ODOR CONTROL.

DESCRIPTOR: *DISINFECTION; *CHLORINATION; *DRINKING WATER; *OPERATIONS (WATER); *ODORS; *PUBLIC HEALTH; POLLUTION; *TASTES; *WATER SUPPLY; *WATER TREATMENT; *WATER RESOURCES; *WATER UTILITIES; *WATER POLLUTION CONTROL

DESCRIPTIVE NOTE: C21-26P.

ABSTRACT: DESCRIBED ARE DISINFECTION TECHNIQUES NECESSARY TO MEET THE NATIONAL INTERIM PRIMARY DRINKING WATER REGULATIONS. INCLUDES INFORMATION ON CHLORINATORS, HYPOCHLORINATORS, AMMONIATORS, CHLORINE EVAPORATORS, CHLORINATOR HOUSING AND ONSITE DISINFECTANT GENERATORS. ALSO COVERS TASTE AND ODOR CONTROL PRACTICES--ADSORPTION, CHEMICAL OXIDATION, ALGAE CONTROL, AND AERATION.

AVAILABILITY: 1980 PUBLIC WORKS MANUAL - PUBLIC WORKS JOURNAL CORPORATION, 200 SOUTH BROAD STREET, RIDGEWOOD, NJ 07451

IRIS ACCESSION NUMBER: EW005018

PUBLICATION DATE: 80

TITLE: WATER SUPPLY AND TREATMENT: MAINS AND SERVICES.

DESCRIPTOR: DESIGN; *MAINTENANCE; *MANAGEMENT; *PIPES; *SERVICE CONNECTIONS; *WATER TREATMENT; *WATER SUPPLY; *WATER MAINS; *WATER DISTRIBUTION; *WATER RESOURCES; *WATER UTILITIES

DESCRIPTIVE NOTE: C-26-35P.

ABSTRACT: THIS ARTICLE DESCRIBES THE WATER UTILITIES DISTRIBUTION SYSTEM. DISCUSSED ARE THE DESIGN, MAINTENANCE AND CONSTRUCTION MATERIALS OF THE TRANSPORTATION SYSTEM. EXAMINES STANDARD SPECIFICATIONS AND DURABILITY OF CAST IRON, STEEL, ASBESTOS-CEMENT, CONCRETE AND THERMOPLASTIC PIPES. ALSO DESCRIBES THE NEGATIVE MERITS OF STEEL, IRON, COPPER, BRASS AND PLASTIC SERVICE CONNECTIONS.

AVAILABILITY: 1980 PUBLIC WORKS MANUAL - PUBLIC WORKS JOURNAL CORPORATION, 200 SOUTH BROAD STREET, RIDGEWOOD, NJ 07451

IRIS ACCESSION NUMBER: EW005019

PUBLICATION DATE: 80

TITLE: WATER SUPPLY AND TREATMENT: PUMPS AND MOTORS.

DESCRIPTOR: *DIESEL ENGINES; *ELECTRIC MOTORS; EQUIPMENT; *MOTORS; *PUMPS; *WATER TREATMENT; *WATER SUPPLY; *WATER RESOURCES; *WATER UTILITIES

DESCRIPTIVE NOTE: C-35-41P.

ABSTRACT: DIFFERENT TYPES OF PUMPING SERVICES ARE USED TO MEET VARIOUS WATER PRODUCTION AND DISTRIBUTION DEMANDS. THESE SERVICES CAN BE CLASSIFIED AS LOW LIFT, DEEP WELL, HIGH LIFT, BOOSTER AND STANDBY. THESE SERVICES REQUIRE A VARITY OF PUMPS AND MOTORS, WHICH ARE EXPLAINED IN DETAIL IN THE ARTICLE.

AVAILABILITY: 1980 PUBLIC WORKS MANUAL - PUBLIC WORKS JOURNAL CORPORATION, 200 SOUTH BROAD STREET, RIDGEWOOD, NJ 07451

IRIS ACCESSION NUMBER: EW005020

PUBLICATION DATE: 80

TITLE: WATER SUPPLY AND TREATMENT: VALVES AND HYDRANTS.

DESCRIPTOR: AUTOMATION; DESIGN; FIRE HYDRANTS; *HYDRANTS; *MANAGEMENT; *MAINTENANCE; PLUMBING; *VALVES; WATER RESOURCES; *WATER UTILITIES; *WATER DISTRIBUTION; *WATER SUPPLY; *WATER TREATMENT

DESCRIPTIVE NOTE: C-41-47P.

ABSTRACT: VARIOUS VALVES ARE NECESSARY IN A WATER DISTRIBUTION SYSTEM; THESE INCLUDE GATE, BUTTERFLY, GLOBE, ROTARY, NEEDLE AND MUD VALVES. AUTOMATION AND VARIOUS OPERATION ACCESSORIES, SUCH AS GEARING FOR MANUAL OPERATION, MOTOR ON HYDRAULIC OPERATORS AND SOLENOIDS, ADD TO THE VERSATILITY OF THEIR APPLICATION. FIRE HYDRANT DESIGN AND SPECIFICATIONS ARE DISCUSSED.

AVAILABILITY: 1980 PUBLIC WORKS MANUAL - PUBLIC WORKS JOURNAL CORPORATION, 200 SOUTH BROAD STREET, RIDGEWOOD, NJ 07451

IRIS ACCESSION NUMBER: EW005021

PUBLICATION DATE: 80

TITLE: WATER SUPPLY AND TREATMENT: WATER STORAGE.

DESCRIPTOR: *CONSTRUCTION (PROCESS); *DESIGN; *ENGINEERING; GROUNDWATER; *RESERVOIRS; *WATER DISTRIBUTION; *WATER TREATMENT; WATER SUPPLY; *WATER RESOURCES; *WATER UTILITIES; *WATER STORAGE; WELLS

DESCRIPTIVE NOTE: C-47-55P.

ABSTRACT: THIS ARTICLE COVERS CONSTRUCTION FEATURES OF RESERVOIRS, BOTH ELEVATED AND GROUND SURFACE, AND DEVELOPMENT OF GROUND WATER SOURCES THROUGH WELL CONSTRUCTION.

AVAILABILITY: 1980 PUBLIC WORKS MANUAL - PUBLIC WORKS JOURNAL CORPORATION, 200 SOUTH BROAD STREET, RIDGEWOOD, NJ 07451

IRIS ACCESSION NUMBER: EW005022

PUBLICATION DATE: 80

TITLE: WATER SUPPLY AND TREATMENT: METERING, MONITORING AND QUALITY CONTROL.

DESCRIPTOR: *LABORATORY EQUIPMENT; *MEASUREMENT EQUIPMENT; *MONITORING; *METERS; MANAGEMENT; *QUALITY CONTROL; *SUPERVISION; *WATER DISTRIBUTION; *WATER RESOURCES; *WATER QUALITY; *WATER SUPPLY; *WATER TREATMENT

DESCRIPTIVE NOTE: C-55-66P.

ABSTRACT: DESCRIBES INSTRUMENTS USED IN METERING THE QUANTITY OF WATER IN BOTH MAINLINE AND CUSTOMER PIPELINES. INCLUDES INFORMATION ON LABORATORY EQUIPMENT AND EVALUATION TESTS NECESSARY FOR MONITORING WATER QUALITY. ALSO DESCRIBES ELECTRONIC RECORDERS AND MONITORING INSTRUMENTS USED IN PRODUCTION PROCESS CONTROL.

AVAILABILITY: 1980 PUBLIC WORKS MANUAL - PUBLIC WORKS JOURNAL CORPORATION, 200 SOUTH BROAD STREET, RIDGEWOOD, NJ 07451

IRIS ACCESSION NUMBER: EW005023

PUBLICATION DATE: 80

TITLE: WATER SUPPLY AND TREATMENT: SYSTEM MAINTENANCE.

DESCRIPTOR: EQUIPMENT; EQUIPMENT MAINTENANCE; HYDRAULICS; *INSPECTION; MANAGEMENT; *MAINTENANCE; MAINS; RESERVOIRS; VALVES; *WATER DISTRIBUTION; *WATER TREATMENT; *WATER SUPPLY; *WATER RESOURCES; *WATER UTILITIES

DESCRIPTIVE NOTE: C-66-72P.

ABSTRACT: SYSTEM MAINTENANCE IS AN INTEGRAL COMPONENT OF THE WATER DISTRIBUTION PROCESS. MAINTENANCE INVOLVES LOCATING MAINS AND VALVES, ELIMINATING LEAKAGE, MAINTAINING MAIN CAPACITIES AND INSTALLING SERVICE CONNECTIONS. WEED AND ALGAE GROWTH IN STORAGE LAKES AND WELLS HAVE TO BE CONTROLLED, RESERVOIRS OCCASIONALLY DREDGED AND DESTRATIFIED,AND WELLS PERIODICALLY RESTORED.

AVAILABILITY: 1980 PUBLIC WORKS MANUAL - PUBLIC WORKS JOURNAL CORPORATION, 200 SOUTH BROAD STREET, RIDGEWOOD, NJ 07451

IRIS ACCESSION NUMBER: EW005024

PUBLICATION DATE: 80

TITLE: WATER POLLUTION CONTROL: COLLECTION SYSTEMS.

DESCRIPTOR: *CONSTRUCTION; CIVIL ENGINEERING; *DESIGN; *PIPES; *SEWERS; *WASTEWATER TREATMENT; *WASTEWATER COLLECTION; *WATER POLLUTION CONTROL; *WASTE DISPOSAL

DESCRIPTIVE NOTE: D2-9P.

ABSTRACT: DESIGN AND CONSTRUCTION OF THE NETWORK OF SEWERS AND INTERCEPTORS ARE CRITICAL FACTORS IN AVOIDING PROBLEMS WITH SYSTEM MAINTENANCE AND PLANT OPERATION. ALIGNMENTS SHOULD BE SELECTED ACCORDING TO ANTICIPATED FLOW AND PIPE SIZE. PIPE SHOULD BE DURABLE FOR THE CONDITIONS ENCOUNTERED

AND PIPE FLOW CHARACTERISTICS SHOULD BE CONSIDERED.

AVAILABILITY: 1980 PUBLIC WORKS MANUAL - PUBLIC WORKS JOURNAL CORPORATION, 200 SOUTH BROAD STREET, RIDGEWOOD, NJ 07451

IRIS ACCESSION NUMBER: EW005025

PUBLICATION DATE: 80

TITLE: WATER POLLUTION CONTROL: PUMPS AND VALVES.

DESCRIPTOR: *DESIGN; EQUIPMENT; *ELECTRICAL SYSTEMS; *MECHANICAL EQUIPMENT; *OPERATIONS (WASTEWATER); *PUMPS; SEWERS; *VALVES; *WATER POLLUTION CONTROL; *WASTEWATER TREATMENT; *WASTEWATER COLLECTION

DESCRIPTIVE NOTE: D-9-17P.

ABSTRACT: BOTH PUMPS AND VALVES IN SEWER COLLECTION SYSTEMS REQUIRE DESIGN TO AVOID CLOGGING AND FLOW RESTRICTIONS. INCLUDED IS INFORMATION ON DESIGN AND INSTALLATION OF WASTEWATER CENTRIFUGAL SLUDGE, EJECTOR AND SUMP PUMPS. ALSO DESCRIBES THE FUNCTION AND DESIGN OF GATE VALVES, AND BACKWATER GATES.

AVAILABILITY: 1980 PUBLIC WORKS MANUAL - PUBLIC WORKS JOURNAL CORPORATION, 200 SOUTH BROAD STREET, RIDGEWOOD, NJ 07451

IRIS ACCESSION NUMBER: EW005026

PUBLICATION DATE: 80

TITLE: WATER POLLUTION CONTROL: PRIMARY TREATMENT.

DESCRIPTOR: CLARIFICATION; DESIGN; *EQUIPMENT; *FACILITIES; FLOCCULATION; FLOTATION; *MECHANICAL EQUIPMENT; *OPERATIONS (WASTEWATER); PRIMARY TREATMENT; QUALITY CONTROL; SCREENING; SETTLING TANKS; *WASTEWATER TREATMENT; *WATER POLLUTION CONTROL; *WASTE DISPOSAL

DESCRIPTIVE NOTE: D-18-26P.

ABSTRACT: DESCRIPTION OF THE PROCESSES AND EQUIPMENT INVOLVED IN THE PRIMARY TREATMENT OF WASTEWATER ---- SCREENING, GRIT COLLECTION, CLARIFICATION, SETTLING, FLOTATION AND FLOCCULATION.

AVAILABILITY: 1980 PUBLIC WORKS MANUAL - PUBLIC WORKS JOURNAL CORPORATION, 200 SOUTH BROAD STREET, RIDGEWOOD, NJ 07451

IRIS ACCESSION NUMBER: EW005027

PUBLICATION DATE: 80

TITLE: WATER POLLUTION CONTROL: SECONDARY TREATMENT.

DESCRIPTOR: *ACTIVATED SLUDGE; *BIOLOGICAL FILTERS; DESIGN; *EQUIPMENT; *FACILITIES; MAINTENANCE; *OPERATIONS (WASTEWATER); *OXIDATION PONDS; *SECONDARY TREATMENT; *WASTEWATER TREATMENT; *WATER POLLUTION CONTROL; *WASTE DISPOSAL

DESCRIPTIVE NOTE: D26-34P.

ABSTRACT: DESCRIBES THE PROCESSES AND EQUIPMENT INVOLVED IN THE SECONDARY TREATMENT OF WASTEWATER ---- ACTIVATED SLUDGE PROCESSES, OXIDATION PONDS AND BIOLOGICAL FILTERS.

AVAILABILITY: 1980 PUBLIC WORKS MANUAL - PUBLIC WORKS JOURNAL CORPORATION, 200 SOUTH BROAD STREET, RIDGEWOOD, NJ 07451

IRIS ACCESSION NUMBER: EW005028

PUBLICATION DATE: 80

TITLE: WATER POLLUTION CONTROL: ADVANCED TREATMENT.

DESCRIPTOR: CHEMICAL TREATMENT; COAGULATION; EQUIPMENT; *FACILITIES; FILTRATION; *LAND APPLICATION; *OPERATIONS (WASTEWATER); PHYSICAL TREATMENT; *RECYCLING; *TERTIARY TREATMENT; *WATER POLLUTION CONTROL; *WASTE DISPOSAL

DESCRIPTIVE NOTE: D-34-41P.

ABSTRACT: DESCRIBED ARE THE PROCESSES AND EQUIPMENT INVOLVED IN THE TERTIARY TREATMENT OF WASTEWATER ---- FILTRATION OF SOLIDS, NUTRIENT REMOVAL, COAGULATION, PHYSICAL-CHEMICAL TREATMENT AND LAND APPLICATION.

AVAILABILITY: 1980 PUBLIC WORKS MANUAL - PUBLIC WORKS JOURNAL CORPORATION, 200 SOUTH BROAD STREET, RIDGEWOOD, NJ 07451

IRIS ACCESSION NUMBER: EW005029

PUBLICATION DATE: 80

TITLE: WATER POLLUTION CONTROL: SLUDGE DIGESTION AND DISPOSAL.

DESCRIPTOR: ANAEROBIC DIGESTION; AEROBIC DIGESTION; DESIGN; *EQUIPMENT; *FACILITIES; *SLUDGE; *SLUDGE DIGESTION; *WASTEWATER TREATMENT; *WATER POLLUTION CONTROL; *WASTE DISPOSAL; DEWATERING; INCINERATION

DESCRIPTIVE NOTE: D-41-52P.

ABSTRACT: DESCRIBED ARE THE PROCESSES AND EQUIPMENT INVOLVED IN SLUDGE DIGESTION AND DISPOSAL ---- ANAEROBIC DIGESTION, AEROBIC DIGESTION, GAS UTILIZATION, CHEMICAL STABILIZATION, UTILIZATION OF SLUDGE AS FERTILIZER, FILTER CAKE DRYING, INCINERATION, WET-AIR OXIDATION AND FLUIDIZED BEDS.

AVAILABILITY: 1980 PUBLIC WORKS MANUAL - PUBLIC WORKS

JOURNAL CORPORATION, 200 SOUTH BROAD STREET, RIDGEWOOD, NJ 07451

IRIS ACCESSION NUMBER: EW005030

PUBLICATION DATE: 80

TITLE: WATER POLLUTION CONTROL: DISINFECTION AND ODOR CONTROL.

DESCRIPTOR: *DISINFECTION; MICROBIOLOGY; ODORS; *OPERATIONS (WASTEWATER); *WASTEWATER TREATMENT; *WATER POLLUTION CONTROL; *WASTE DISPOSAL

DESCRIPTIVE NOTE: D-52-55P.

ABSTRACT: DESCRIBED ARE THE DISINFECTION AND ODOR CONTROL PROCESSES. CONTAINS INFORMATION ON APPLICATION OF THE APPROPRIATE CHEMICALS, DEODORIZING CHEMICALS, ODOR COMBUSTION AND ODOR ADSORPTION.

AVAILABILITY: 1980 PUBLIC WORKS MANUAL - PUBLIC WORKS JOURNAL CORPORATION, 200 SOUTH BROAD STREET, RIDGEWOOD, NJ 07451

IRIS ACCESSION NUMBER: EW005031

PUBLICATION DATE: 80

TITLE: WATER POLLUTION CONTROL: OPERATION CONTROL.

DESCRIPTOR: *DATA COLLECTION; DATA ANALYSIS; EQUIPMENT; MONITORING; LABORATORY EQUIPMENT; MEASUREMENT EQUIPMENT; MICROBIOLOGY; *OPERATIONS (WASTEWATER); SAMPLING; *SUPERVISION; SAFETY; *WASTEWATER TREATMENT; *WATER POLLUTION CONTROL; WASTE DISPOAL

DESCRIPTIVE NOTE: D-56-61P.

ABSTRACT: DESCRIBED ARE THE CONTROL PROCESSES INVOLVED IN OPERATING AND MONITORING A WASTEWATER TREATMENT PLANT. INCLUDES INFORMATION ON EQUIPMENT AND TECHNIQUES FOR MEASURING OPEN FLOW, PIPE FLOW, GAS, TEMPERATURE, RAIN AND SLUDGE. ALSO CONTAINS TECHNICAL ADVICE ON SAMPLING INSTRUMENTS, LABORATORY EQUIPMENT, SAFETY INSTRUMENTATION AND SUPERVISORY CONTROL.

AVAILABILITY: 1980 PUBLIC WORKS MANUAL - PUBLIC WORKS JOURNAL CORPORATION, 200 SOUTH BROAD STREET, RIDGEWOOD, NJ 07451

IRIS ACCESSION NUMBER: EW005032

PUBLICATION DATE: 80

TITLE: WATER POLLUTION CONTROL: SEWER MAINTENANCE AND REHABILITATION.

DESCRIPTOR: *INSPECTION; *MAINTENANCE; *SEWERS; *SAFETY; *WASTEWATER COLLECTION; *WATER POLLUTION CONTROL; *WASTE DISPOSAL

DESCRIPTIVE NOTE: D-61-67P.

ABSTRACT: DESCRIBED ARE THE TECHNIQUES AND INSTRUMENTS INVOLVED IN SEWER MAINTENANCE AND REHABILITATION. INCLUDES EVALUATION PROCEDURES, OBSTRUCTION REMOVAL, TELEVISION INSPECTION, CHEMICAL GROUTING, MAJOR REPAIR METHODS, CONTRACT SERVICES, PREVENTIVE MAINTENANCE, MAINTENANCE PERSONNEL AND SAFETY APPLIANCES.

AVAILABILITY: 1980 PUBLIC WORKS MANUAL - PUBLIC WORKS JOURNAL CORPORATION, 200 SOUTH BROAD STREET, RIDGEWOOD, NJ 07451

IRIS ACCESSION NUMBER: EW005033

PUBLICATION DATE: AUG 80

TITLE: STATE/EPA AGREEMENTS.

PERSONAL AUTHOR: JOSEPHSON, JULIAN

DESCRIPTOR: *ENVIRONMENT; *ENVIRONMENTAL FACTORS; *ENVIRONMENTAL PROTECTION AGENCY; *FEDERAL REGULATIONS; *FEDERAL STATE RELATIONSHIP; *MANAGEMENT; NATURAL RESOURCES; *PLANNING; *POLLUTION; RECYCLING; *WATER POLLUTION CONTROL

DESCRIPTIVE NOTE: 899-900P.

ABSTRACT: TO OPTIMIZE THE USE OF FINANCIAL AND TECHNICAL RESOURCES, A SYSTEM OF STATE/EPA AGREEMENTS (SEA'S) HAS BEEN EVOLVED. THESE SEA'S HAVE GREAT POTENTIAL AS A TOOL IN PLANNING, MANAGING, AND IMPLEMENTING ENVIRONMENTAL PROGRAMS.

AVAILABILITY: ENVIRONMENTAL SCIENCE AND TECHNOLOGY; V14 N8

IRIS ACCESSION NUMBER: EW005034

PUBLICATION DATE: AUG 80

TITLE: WATER-TREATMENT CHEMICALS.

PERSONAL AUTHOR: MILLER, STANTON

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *CHEMICAL ANALYSIS; *CHEMICALS; CHEMICAL REACTIONS; *DRINKING WATER; *GUIDELINES; *PUBLIC HEALTH; *WATER TREATMENT; *WATER SUPPLY; *WATER RESOURCES

DESCRIPTIVE NOTE: 914-915P.

ABSTRACT: IN THE U.S., APPROXIMATELY 60 CHEMICALS ARE USED AS ADDITIVES IN THE COLLECTION, TREATMENT, OR DELIVERY OF DRINKING WATER. AT PRESENT THERE ARE NO DATA FOR THE USE OF THESE CHEMICALS. AN NAS COMMITTEE IS TRYING TO FORM GUIDELINES FOR USE OF THESE CHEMICALS, AND ANALYTICAL TESTS FOR PURITY OF THE CHEMICALS.

AVAILABILITY: ENVIRONMENTAL SCIENCE AND TECHNOLOGY; V14 N8

IRIS ACCESSION NUMBER: EW005035

PUBLICATION DATE: AUG 80

TITLE: DEVELOPING SOLUTIONS TO HAZARDOUS-WASTE PROBLEMS.

PERSONAL AUTHOR: POJASEK, ROBERT B.

DESCRIPTOR: ANALYTICAL TECHNIQUES; *FEDERAL LEGISLATION; *FEDERAL REGULATIONS; *HAZARDOUS MATERIALS; NATURAL RESOURCES; *POLLUTION; *PUBLIC HEALTH; PUBLIC POLICY; RECYCLING; RESEARCH; TECHNOLOGY; *WASTE DISPOSAL; *WASTES

DESCRIPTIVE NOTE: 924-929P.

ABSTRACT: OUTLINED ARE THE AREAS OF HAZARDOUS WASTE DISPOSAL ISSUES WHICH REQUIRE RESEARCH. DISCUSSION INCLUDES (1) RESEARCH INITIATIVE; (2) ANALYTICAL DEVELOPMENTS; (3) TECHNOLOGICAL DEVELOPMENTS; (4) SITING DEVELOPMENT; (5) MEDIATION; AND (6) CITIZEN INVOLVEMENT.

AVAILABILITY: ENVIRONMENTAL SCIENCE AND TECHNOLOGY; V14 N8

IRIS ACCESSION NUMBER: EW005036

PUBLICATION DATE: AUG 80

TITLE: DETERMINING VOLATILE ORGANICS IN WATER.

PERSONAL AUTHOR: MIEURE, JAMES P.

DESCRIPTOR: ANALYTICAL TECHNIQUES; *CHEMICAL ANALYSIS; CHEMICAL REACTIONS; LABORATORY PROCEDURES; *ORGANIC CHEMISTRY; *POLLUTION; PUBLIC HEALTH; *WATER POLLUTION CONTROL; WATER RESOURCES

DESCRIPTIVE NOTE: 930-935P.

ABSTRACT: THE PRINCIPLES AND MERITS OF SEVERAL ANALYTICAL TECHNIQUES FOR DETERMINING TRACE VOLATILE ORGANIC MATERIALS IN WATER ARE DISCUSSED. SPECIFIC TECHNIQUES ARE COMPARED FOR RELATIVE EFFECTIVENESS ACCORDING TO STATED CRITERIA.

AVAILABILITY: ENVIRONMENTAL SCIENCE AND TECHNOLOGY; V14 N8

IRIS ACCESSION NUMBER: EW005037

PUBLICATION DATE: AUG 80

TITLE: RESOLUTION OF AN INDUSTRIAL WASTE DILEMMA.

PERSONAL AUTHOR: MORGAN, JOHN R.

DESCRIPTOR: CASE STUDIES; *INDUSTRIAL WASTES; *OPERATIONS (WASTEWATER); *PROBLEM SOLVING; SLUDGE; *TROUBLESHOOTING; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 57-59P.

ABSTRACT: DESCRIBES SOLUTIONS OF TWO OPERATING PROBLEMS AT A WASTEWATER TREATMENT PLANT IN NEW PHILADELPHIA, OHIO: LARGE VOLUMES OF COOLING AND PROCESS WATER WERE BEING DISCHARGED INTO THE SANITARY COLLECTION SYSTEM CAUSING AN UNDESIRABLE DILUTION FACTOR AND A FLOATING SLUDGE PHENOMENON CHARACTERISTIC OF DENITRIFICATION FOR WHICH NO CAUSE COULD BE IDENTIFIED.

AVAILABILITY: PUBLIC WORKS; VIII N8

IRIS ACCESSION NUMBER: EW005038

PUBLICATION DATE: AUG 80

TITLE: CITY EXAMINES EFFECTS OF ROAD SALTING OF ITS WATER SUPPLY.

PERSONAL AUTHOR: MOYLAND, ROBERT L.

DESCRIPTOR: CASE STUDIES; *DRINKING WATER; ENVIRONMENTAL QUALITY; *HIGHWAY SALTING; *MASSACHUSETTS; *SALT RUNOFF; SALT; SODIUM; *WATER QUALITY; *WATER SUPPLY

DESCRIPTIVE NOTE: 59-60P.

ABSTRACT: SUPPLIES INFORMATION CONCERNING THE EFFECT OF WINTER SALTING OF STREETS IN WORCESTER, MASSACHUSETTS, ON THE QUALITY OF THE MUNICIPAL WATER SUPPLY, AND THE LOCATIONS WHERE SALT RUNOFF COULD BE ENTERING THE WATER SUPPLY SYSTEM.

AVAILABILITY: PUBLIC WORKS; VIII N8

IRIS ACCESSION NUMBER: EW005039

PUBLICATION DATE: AUG 80

TITLE: AGING URBAN WATER SYSTEMS: A COMPUTERIZED CASE STUDY.

PERSONAL AUTHOR: O'DAY, D. KELLEY; AND OTHERS

DESCRIPTOR: CASE STUDIES; DRINKING WATER; *MAINTENANCE; NEW YORK; *OPERATIONS (WATER); *URBAN PROBLEMS; *URBAN RENEWAL; *WATER SUPPLY; *WATER DISTRIBUTION; *WATER MAINS

DESCRIPTIVE NOTE: 61-64P.

ABSTRACT: REPORTS FINDINGS AND CONCLUSIONS OF A STUDY INVESTIGATING WATER MAIN BREAK EXPERIENCES IN MANHATTAN AND OTHER BOROUGHS IN NEW YORK CITY.

AVAILABILITY: PUBLIC WORKS; VIII N8

IRIS ACCESSION NUMBER: EW005040

PUBLICATION DATE: AUG 80

TITLE: CODISPOSAL OF REFUSE AND SLUDGE.

PERSONAL AUTHOR: COSULICH, WILLIAM F.

DESCRIPTOR: CASE STUDIES; *DESIGN; *ECONOMICS; INCINERATION; MINNESOTA; NEW YORK; OPERATIONS (WASTEWATER); *REFUSE; *SLUDGE; *THERMAL DISPOSAL; *WASTE DISPOSAL; WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 66-69P.

ABSTRACT: REVIEWS THE CONCEPT OF THERMAL CODISPOSAL OF SLUDGE AND REFUSE. DISCUSSES FOUR CURRENT SYSTEMS FOR CODISPOSAL AND PROVIDES DIAGRAMS FOR EXEMPLARY SYSTEMS IN NEW YORK AND MINNESOTA. ECONOMICS OF CODISPOSAL ARE ALSO REVIEWED.

AVAILABILITY: PUBLIC WORKS; VIII N8

IRIS ACCESSION NUMBER: EW005041

PUBLICATION DATE: AUG 80

TITLE: SNOW REMOVAL EQUIPMENT MODIFICATIONS DESIGNED TO REDUCE OVERTIME.

DESCRIPTOR: CASE STUDIES; *EQUIPMENT; INDIANA; *MAINTENANCE; *PROBLEM SOLVING; *SNOW REMOVAL; *VEHICLES

DESCRIPTIVE NOTE: 72-73P.

ABSTRACT: DESCRIBES STEPS MADE BY THE STATE OF INDIANA TO STANDARDIZE SNOW REMOVAL EQUIPMENT WHILE EVALUATING THE PERFORMANCE AND/OR LONGEVITY OF A GIVEN UNIT. IN PARTICULAR, CHANGES IN THE MASTER CONTROL CONSOLE AND HYDRAULIC OIL RESERVOIR THAT HOUSES ALL HYDRAULIC VALVES ARE DETAILED.

AVAILABILITY: PUBLIC WORKS; VIII N8

IRIS ACCESSION NUMBER: EW005042

PUBLICATION DATE: AUG 80

TITLE: EFFECTIVE WASTEWATER MANAGEMENT PLANNING FOR SMALL COMMUNITIES - PART I.

PERSONAL AUTHOR: BARROR, RICHARD F.; TCHOBANOGLOUS, GEORGE

DESCRIPTOR: CLEAN WATER ACT; *FEDERAL REGULATION; *GRANTS PROGRAMS; *MANAGEMENT; OPERATIONS (WASTEWATER); *PLANNING; *SMALL COMMUNITIES; *WATER SUPPLY; *WASTEWATER TREATMENT; *WATER POLLUTION CONTROL

DESCRIPTIVE NOTE: 76-80P.

ABSTRACT: EXAMINES WASTEWATER MANAGEMENT PLANNING WITH RESPECT TO THE FEDERAL REGULATORY PROCESS, GRANTS PROCESS AND THE UNIQUE PLANNING CONSIDERATIONS OF SMALL COMMUNITIES. CONSIDERS SMALL COMMUNITY MANAGEMENT, LOCAL SERVICES AND EMPLOYMENT, AND PLANNING. DESIRED PROJECT CHARACTERISTICS ARE ALSO DISCUSSED. THE CURRENT FEDERAL APPROACH IS DETAILED.

AVAILABILITY: PUBLIC WORKS; VIII N8

IRIS ACCESSION NUMBER: EW005043

PUBLICATION DATE: AUG 80

TITLE: COST ESTIMATES FOR WATER TREATMENT PLANT OPERATION AND MAINTENANCE.

DESCRIPTOR: *COSTS; *FACILITIES; *MAINTENANCE; *OPERATIONS (WATER); *PACKAGE PLANTS; *WATER TREATMENT; WATER SUPPLY

DESCRIPTIVE NOTE: 81-83P.

ABSTRACT: DISCUSSES DATA SELECTED FROM A LARGER REPORT THAT ESTIMATES WATER TREATMENT COSTS IN OCTOBER 1978 DOLLARS. TABLES PRESENT ANNUAL COSTS FOR THE FOLLOWING: PACKAGE COMPLETE TREATMENT PLANTS, CONVENTIONAL TREATMENT PLANTS, DIRECT FILTRATION PLANTS, SOFTENING AND PRESSURE FILTRATION PLANTS, AND GRANULAR ACTIVATED CARBON PLANTS.

AVAILABILITY: PUBLIC WORKS; VIII N8

IRIS ACCESSION NUMBER: EW005044

PUBLICATION DATE: JUL 80

TITLE: HOW MUCH WATER SUPPLY CAPACITY IS ENOUGH?

PERSONAL AUTHOR: BOLAND, JOHN J.; AND OTHERS

DESCRIPTOR: COSTS; DESIGN; *DROUGHT; ECONOMIC FACTORS; *MANAGEMENT; *MATHEMATICAL MODELING; *OPERATIONS (WATER); RISK MANAGEMENT STRATEGIES; WATER RESOURCES; WATER STORAGE; *WATER SUPPLY; WATER USE

DESCRIPTIVE NOTE: 368-374P.

ABSTRACT: AS DEMAND INCREASES, UTILITY MANAGERS ARE MORE FREQUENTLY FACED WITH THE DILEMMA OF WHETHER TO INCREASE STORAGE CAPACITY OR TO RISK THE IMPOSITION OF WATER USE RESTRICTIONS IN THE EVENT OF DROUGHT. TO ENSURE THAT A DECISION IS MADE, SCENARIOS CAN BE DEVELOPED OF THE PROBABILITY THAT DROUGHT MANAGEMENT MEASURES WILL BE IMPOSED. THE RANGE OF SCENARIOS AND THE CORRESPONDING WATER SUPPLY PROJECTS CAN THEN BE EVALUATED TO YIELD THE BEST COMPROMISE BETWEEN, ON THE DEMAND SIDE, RISK AND THE COST OF WATER USE RESTRICTIONS, AND ON THE SUPPLY SIDE, THE ECONOMIC, SOCIAL, AND ENVIRONMENTAL COSTS OF PROVIDING INCREASED CAPACITY.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL; V72 N7

IRIS ACCESSION NUMBER: EW005045
PUBLICATION DATE: JUL 80

TITLE: WATER REUSE FOR GROUNDWATER RECHARGE: AN OVERVIEW.

PERSONAL AUTHOR: ROBERTS, PAUL V.

DESCRIPTOR: AQUIFERS; GROUNDWATER; *GROUNDWATER RECHARGE; HEALTH EFFECTS; HEALTH RISKS; MONITORING; *RECLAIMED WATER; *WATER QUALITY; *WATER RESOURCES; *WATER REUSE

DESCRIPTIVE NOTE: 375-379P.

ABSTRACT: USING RECLAIMED WATER TO ARTIFICALLY RECHARGE GROUNDWATER AQUIFERS IS ONE OF THE MORE PROMISING APPROACHES TO REPLENISHING DWINDLING WATER RESOURCES IN WATER-SHORT AREAS. WHEN THIS RECLAIMED WATER WILL BE USED FOR DOMESTIC CONSUMPTION, HOWEVER, MANY QUESTIONS ARISE THAT RANGE FROM THE HEALTH EFFECTS TO THE APPROPRIATE WATER QUALITY STANDARDS FOR THE POINTS OF RECHARGE AND EXTRACTION TO THE AVAILABLE ALTERNATIVE METHODS OF WATER RECLAMATION TECHNOLOGY. THIS SUMMARY REPORTS THE PROGRESS MADE TOWARD DEFINING AND ANSWERING THESE QUESTIONS.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL; V72 N7

IRIS ACCESSION NUMBER: EW005046

PUBLICATION DATE: JUL 80

TITLE: GROUNDWATER RECHARGE OPERATIONS IN CALIFORNIA.

PERSONAL AUTHOR: ASANO, TAKASHI; WASSERMANN, KURT L.

DESCRIPTOR: *CALIFORNIA; ENGINEERING TECHNOLOGY; *GROUNDWATER; *GROUNDWATER RECHARGE; HEALTH EFFECTS; HYDROLOGY; INJECTION WELLS; MUNICIPAL WASTEWATER; RECLAIMED WATER; RESEARCH; *WATER RECLAMATION; *WATER RESOURCES; *WATER REUSE

DESCRIPTIVE NOTE: 380-385P.

ABSTRACT: THE CALIFORNIA WATER CODE DICTATES THAT THE DEVELOPMENT OF WATER RECLAMATION FACILITIES BE ENCOURAGED AS A MEANS TO HELP MEET THE STATE'S GROWING WATER REQUIREMENTS. GROUNDWATER RECHARGE WITH RECLAIMED MUNICIPAL WASTEWATER IS AN APPROACH TO WATER REUSE THAT RESULTS IN THE PLANNED AUGMENTATION OF GROUNDWATER SUPPLIES. THE PRACTICE OF ARTIFICIAL GROUNDWATER RECHARGE WITH RECLAIMED WATER BY INJECTION WELLS IS BECOMING INCREASINGLY IMPORTANT AND MUST BE SERIOUSLY CONSIDERED IN PLANNING FOR INCREASED WATER REUSE IN THE FUTURE.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL; V72 N7

IRIS ACCESSION NUMBER: EW005047
PUBLICATION DATE: JUL 80

TITLE: THE STATUS OF DIRECT FILTRATION.

DESCRIPTOR: ALGAE; *CASE STUDIES; COAGULANTS; COST EFFECTIVENESS; *DESIGN NEEDS; *DIRECT FILTRATION; FEASIBILITY STUDIES; FILTRATION; MONITORING; OPERATIONS (WATER); PH; POLYMERS; RESEARCH NEEDS; SURVEYS; *WATER TREATMENT; *WATER QUALITY

DESCRIPTIVE NOTE: 405-411P.

ABSTRACT: ADVANCES IN WATER FILTRATION PROCESS TECHNOLOGY AND THE AVAILABILITY OF NEW POLYMER COAGULANTS HAVE MADE THE USE OF DIRECT FILTRATION WITH ITS ATTENDANT COST SAVINGS A VIABLE TREATMENT DESIGN IN MANY CASES. PREPARED BY THE DIRECT FILTRATION SUBCOMMITTEE OF THE AWWA FILTRATION COMMITTEE AND APPROVED BY THE TECHNICAL AND PROFESSIONAL COUNCIL, THIS REPORT DISCUSSES THE RESULTS OF A WORLDWIDE SURVEY OF OPERATING AND PILOT PLANTS THAT ARE USING THE DIRECT FILTRATION PROCESS.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL; V72 N7

IRIS ACCESSION NUMBER: EW005048

PUBLICATION DATE: JUL 80

TITLE: TREATMENT TECHNOLOGY TO MEET THE INTERIM PRIMARY DRINKING WATER REGULATIONS FOR INORGANICS: PART 59

PERSONAL AUTHOR: SORG, THOMAS J.; LOGSDON, GARY S.

DESCRIPTOR: ACTIVATED CARBON ADSORPTION; *BARIUM; CHEMISTRY; COAGULATION; *DRINKING WATER; ENVIRONMENTAL REGULATIONS; HEALTH EFFECTS; *INORGANIC CONTAMINANTS; ION EXCHANGE; LABORATORY TESTING; LIME SOFTENING; PILOT STUDIES; *RADIONUCLIDES; REVERSE OSMOSIS; *WATER SUPPLY; WATER QUALITY; *WATER TREATMENT

DESCRIPTIVE NOTE: 411-422P.

ABSTRACT: THIS IS THE FINAL REPORT OF A FIVE-PART SERIES THAT SUMMARIZES THE EXISTING TREATMENT TECHNOLOGY TO MEET THE NATIONAL INTERIM PRIMARY DRINKING WATER REGULATIONS FOR INORGANICS. TREATMENT TECHNOLOGY FOR THE REMOVAL OF BARIUM AND RADIONUCLIDES IS PRESENTED WITH EMPHASIS PLACED ON LABORATORY JAR TEST AND PILOT PLANT STUDIES CONDUCTED BY THE DRINKING WATER RESEARCH DIVISION OF USEPA. WHERE AVAILABLE, FULL-SCALE TREATMENT DATA ALSO ARE PRESENTED. THE PRINCIPAL TREATMENT TECHNIQUES DISCUSSED ARE CONVENTIONAL COAGULATION, LIME SOFTENING, ACTIVATED CARBON ABSORPTION, ION EXCHANGE, AND REVERSE OSMOSIS. A GENERAL DISCUSSION OF THE HEALTH EFFECTS AND THE CHEMISTRY OF EACH COMTAMINANT IS ALSO PRESENTED.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL; V72 N7

IRIS ACCESSION NUMBER: EW005049

PUBLICATION DATE: JUL 80

TITLE: MAKE SEWAGE A VALUABLE COMMODITY.

PERSONAL AUTHOR: CHRISTOPHER, BILL

DESCRIPTOR: *AGRICULTURE; *CONSERVATION; COLORADO; *EFFLUENTS; *IRRIGATION; *SLUDGE; *SEWAGE; *RECYCLING; UTILITIES; *WATER RESOURCES; *WASTE DISPOSAL

DESCRIPTIVE NOTE: 47-48P.

ABSTRACT: DESCRIBES HOW REUSE OF EXISTING WATER RESOURCES AND THE PRODUCTIVE USE OF WASTEWATER EFFLUENT HAVE BECOME A REALITY IN WESTMINISTER, COLORADO. THE PROGRAM EXCHANGES THE CITY'S SECONDARY TREATMENT SEWAGE EFFLUENT FOR AN EQUAL AMOUNT OF THE FARMERS' IRRIGATION WATER.

AVAILABILITY: AMERICAN CITY AND COUNTY, V95 N7

IRIS ACCESSION NUMBER: EW005050

PUBLICATION DATE: JUL 80

TITLE: WE INSTALL OUR OWN WATER MAINS.

PERSONAL AUTHOR: COOTE, PHILIP A.

DESCRIPTOR: COST EFFECTIVENESS; *CONSTRUCTION; *WATER MAINS; *UTILITIES; *WATER SUPPLY

DESCRIPTIVE NOTE: 61-63P.

ABSTRACT: DESCRIBES WHY THE VALPARAISO (INDIANA) DEPARTMENT OF WATER WORKS DECIDED TO DO THEIR OWN CONSTRUCTION. ARTICLE INDICATES THAT THIS APPROACH RESULTS IN BETTER CONTROL AND FAST, EFFICIENT CONSTRUCTION.

AVAILABILITY: AMERICAN CITY AND COUNTY, V95 N7

IRIS ACCESSION NUMBER: EW005051

PUBLICATION DATE: JUL 80

TITLE: DESIGN CONSIDERATIONS FOR DISSOLVED AIR FLOTATION.

PERSONAL AUTHOR: GULAS, VICTOR; AND OTHERS

DESCRIPTOR: *ACTIVATED SLUDGE; *DESIGN; *DISSOLVED AIR FLOTATION; *OPERATIONS (WASTEWATER); PROCESS CONTROL; SLUDGE; *SLUDGE CONCENTRATION; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 30-31P.

ABSTRACT: DESCRIBES THE DISSOLVED AIR FLOTATION (DAF) METHOD AS AN EFFECTIVE METHOD OF CONCENTRATING WASTE ACTIVATED SLUDGE. THESE PARAMETERS IN DESIGNING A DAF SYSTEM ARE DISCUSSED: AIR:SOLIDS (A:S) RATIO, AERATION PRESSURE, SIZE OF AIR BUBBLES FORMED. CONDITIONS FOR SUCCESSFUL DAF PROCESSING ARE ALSO DISCUSSED.

AVAILABILITY: WATER AND SEWAGE WORKS; V127 N7

IRIS ACCESSION NUMBER: EW005052

PUBLICATION DATE: JUL 80

TITLE: SELECTING, KEEPING, AND MOTIVATING EMPLOYEES.

PERSONAL AUTHOR: CULP; AND OTHERS

DESCRIPTOR: COLLECTIVE BARGAINING; COMMUNICATION SKILLS; *EMPLOYER EMPLOYEE RELATIONS; LEADERSHIP; *MANAGEMENT (PERSONNEL); *PERSONNEL; *PERSONNEL EVALUATION

DESCRIPTIVE NOTE: 56-57P.

ABSTRACT: REVIEWS PROCEDURES FOR EFFECTIVELY SELECTING, KEEPING, AND MOTIVATING EMPLOYEES. DISCUSSES THESE SOURCES OF COMMUNICATION: EMPLOYEE MANUAL, DAY-TO-DAY CONTACTS, PERFORMANCE EVALUATIONS, PERSONNEL RECORDS, SALARY AND BENEFIT STRUCTURE, MOTIVATION, ABSENTEEISM, PROMOTIONS, AND COLLECTIVE BARGAINING. A SAMPLE PERSONNEL PERFORMANCE EVALUATION FORM IS PROVIDED. A TABLE LISTS LEADERSHIP TRAITS.

AVAILABILITY: WATER AND SEWAGE WORKS; V127 N7

IRIS ACCESSION NUMBER: EW005053

PUBLICATION DATE: JUL 80

TITLE: SOLVING HANDS-ON OPERATIONAL PROBLEMS.

PERSONAL AUTHOR: BUSCH, PAUL L.

DESCRIPTOR: *DESIGN; *OPERATIONS (WASTEWATER); *PROBLEM SOLVING; *PROCESS CONTROL; *TROUBLESHOOTING; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 38-39P.

ABSTRACT: LISTS SEVERAL COMMON VARIANCES THAT AFFECT THE STEADY-STATE CONCEPT THAT TREATMENT PLANTS WILL USUALLY OPERATE IN A NORMAL MANNER. REVIEWS EFFECTIVE METHODS OF TROUBLESHOOTING, INCLUDING MAKING CAREFUL OBSERVATIONS, REVIEWING AVAILABLE DATA, REVIEWING FLOW DIAGRAMS, OBTAINING ADDITIONAL DATA.

AVAILABILITY: WATER AND SEWAGE WORKS; V127 N7

IRIS ACCESSION NUMBER: EW005054

PUBLICATION DATE: JUL 80

TITLE: DISTRIBUTION SYSTEM LIABILITY.

PERSONAL AUTHOR: KURANZ, JOSEPH H.
DESCRIPTOR: CONSTRUCTION; *DRINKING WATER; *LEGAL RESPONSIBILITIES; *MANAGEMENT; *OPERATIONS (WATER); *SAFE WATER DRINKING ACT; *WATER TREATMENT; WATER SUPPLY; WATER MAINS

DESCRIPTIVE NOTE: 40-41P.

ABSTRACT: REVIEWS AREAS UNDER THE SAFE WATER DRINKING ACT WHICH INDICATE LEGAL RESPONSIBILITIES OF WATER UTILITY MANAGEMENT. DISCUSSES LIABILITIES RELATED TO FURNISHING QUALITY WATER AND SERVICE; WATER MAIN FAILURES; AND CONSTRUCTION AND REPAIR OF DISTRIBUTION SYSTEM FACILITIES.

AVAILABILITY: WATER AND SEWAGE WORKS; V127 N7

IRIS ACCESSION NUMBER: EW005055

PUBLICATION DATE: JUL 80

TITLE: ASSESSING FLUID FLOW MEASUREMENTS.

PERSONAL AUTHOR: CHEREMISINOFF, N. P.

DESCRIPTOR: *DESIGN; EQUIPMENT; *FLOW MEASUREMENT; *INSTRUMENTATION; MEASUREMENT; *OPERATIONS (WATER); *WATER TREATMENT; *WATER SUPPLY

DESCRIPTIVE NOTE: 44-45,48,52,62P.

ABSTRACT: REVIEWS THE MAJOR CLASSES OF FLOW-MEASURING DEVICES EMPLOYED IN CLOSED-CHANNEL FLOW: DIFFERENTIAL-PRESSURE METERS, POSITIVE DISPLACEMENT METERS, MECHANICAL FLOW METERS, MAGNETIC FLOW METERS, ULTRASONIC FLOW METERS, AND MASS-FLOW TRANDUCERS.

AVAILABILITY: WATER AND SEWAGE WORKS; V127 N7

IRIS ACCESSION NUMBER: EW005056

PUBLICATION DATE: JUL 80

TITLE: MARION FACILITY GETS A LOT FOR ITS MONEY.

PERSONAL AUTHOR: POWER, LEE

DESCRIPTOR: AERATION; *COSTS; *FACILITIES; *MAINTENANCE; *NEW YORK; *OPERATIONS (WASTEWATER); OZONE; SECONDARY TREATMENT; TERTIARY TREATMENT; WASTEWATER COLLECTION; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 46-47P.

ABSTRACT: DESCRIBES ASPECTS OF A WASTEWATER FACILITY IN MARION, NEW YORK, INCLUDING COLLECTION, RAW SEWAGE TREATMENT, AERATION, SECONDARY TREATMENT, OZONE FLOTATION, COSTS FOR INITIAL CONSTRUCTION, YEARLY OPERATION AND MAINTENANCE.

AVAILABILITY: WATER AND SEWAGE WORKS; V127 N7

IRIS ACCESSION NUMBER: EW005057

PUBLICATION DATE: JUL 80

TITLE: TOXICS--TRUTH AND CONSEQUENCES.

PERSONAL AUTHOR: FELICIANO, D. V.

DESCRIPTOR: *CARCINOGENS; CHEMICALS; POLLUTION; *POLLUTANTS; *SAFETY; *TOXIC SUBSTANCES; TOXINS; WATER SUPPLY; *WATER POLLUTION CONTROL; WATER QUALITY

DESCRIPTIVE NOTE: 1857-1864P.

ABSTRACT: REVIEWS THE TOPIC OF TOXIC SUBSTANCES, DISCUSSING TOXIC CHEMICALS IN THE ENVIRONMENT (NUMBERS, EFFECTS, WATER AS A MAJOR VEHICLE, THE ENTRY OF PRIORITY POLLUTANTS INTO TREATMENT WORKS); EFFECTS OF TOXICS (CHARACTERIZATION, IRREVERSIBILITY, PRINCIPLES OF TOXICOLOGY, SAFETY FACTORS, ANIMAL TESTING FOR CANCER); RISK ASSESSMENT; AND WHETHER CANCER IS CAUSED BY ENVIRONMENTAL CARCINOGENS.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION; V52 N7

IRIS ACCESSION NUMBER: EW005058

PUBLICATION DATE: JUL 80

TITLE: WASTEWATER DISINFECTION--CURRENT PRACTICES.

PERSONAL AUTHOR: JOHNSON, B. P.

DESCRIPTOR: *COST; CANADA; *DESIGN; *DISINFECTION; FACILITIES; *OPERATIONS (WASTEWATER); *SURVEYS; WATER SUPPLY; *WASTEWATER TREATMENT; WATER QUALITY

DESCRIPTIVE NOTE: 1865-1868P.

ABSTRACT: SUMMARIZES RESULTS OF A SURVEY UNDERTAKEN BY THE WASTEWATER DISINFECTION COMMITTEE TO REVIEW DISINFECTION PRACTICES IN THE UNITED STATES AND CANADA. TABLES PRESENT DATA REGARDING DESIGN FLOW, DISINFECTING AGENTS, DISINFECTANT RESIDUAL CONTROL TESTS, COST.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION; V52 N7

IRIS ACCESSION NUMBER: EW005059

PUBLICATION DATE: JUL 80

TITLE: OPERATIONAL FACTORS AFFECTING BIOLOGICAL TREATMENT PLANT PERFORMANCE.

PERSONAL AUTHOR: GRAY, ALBERT C.; AND OTHERS

DESCRIPTOR: ADMINISTRATION; *BIOLOGICAL TREATMENT; DESIGN; *EVALUATION; *FACILITIES; *MAINTENANCE; *OPERATIONS (WASTEWATER); RESEARCH PROJECTS; *WASTEWATER TREATMENT; WATER SUPPLY

DESCRIPTIVE NOTE: 1880-1892P.

ABSTRACT: DISCUSSES RESULTS OF A RESEARCH PROJECT DESIGNED TO PROVIDE ANSWERS TO QUESTIONS REGARDING MAJOR FACTORS ADVERSELY AFFECTING TREATMENT PLANT PERFORMANCE, WHAT CATEGORY (DESIGN, MAINTENANCE, OPERATION, ADMINISTRATION), HOLDS THE MOST POTENTIAL FOR IMPROVING EFFLUENT QUALITY, AND WHAT PROGRAMS ARE MOST LIKELY TO IMPROVE PERFORMANCE OF EXISTING TREATMENT PLANTS.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION; V52 N7

IRIS ACCESSION NUMBER: EW005060

PUBLICATION DATE: JUL 80

TITLE: TUBE SETTLERS IN SECONDARY CLARIFICATION OF DOMESTIC WASTEWATERS.

PERSONAL AUTHOR: MENDIS, J. BERTRAND; BENEDEK, ANDREW

DESCRIPTOR: *CANADA; *CASE STUDIES; *EQUIPMENT; *FACILITIES; *PROCESS CONTROL; *SECONDARY TREATMENT; SLUDGE; *TUBE SETTLERS; *WASTEWATER TREATMENT; WATER SUPPLY

DESCRIPTIVE NOTE: 1893-1897P.

ABSTRACT: EXAMINES AN EFFICIENT METHOD FOR REMOVING SOLIDS FROM WASTEWATERS, THE PROCESS OF HIGH-RATE GRAVITY CLARIFICATION USING TUBE SETTLERS. REPORTS THE RESULTS OF A STUDY OF A PLANT IN WINNIPEG, MANITOBA, IN WHICH TUBE SETTLERS WERE INSTALLED ACROSS THE ENTIRE AVAILABLE CLARIFIER SURFACE.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION; V52 N7

IRIS ACCESSION NUMBER: EW005061

PUBLICATION DATE: JUL 80

TITLE: ELECTROLYTIC FERRITE FORMATION SYSTEM FOR HEAVY METAL REMOVAL.

PERSONAL AUTHOR: NOJIRI, NOAHIRO; AND OTHERS

DESCRIPTOR: DESIGN; *EQUIPMENT; FERRITES; HEAVY-METAL IONS; *HEAVY METALS; PHOSPHATES; *PROCESS CONTROL; SLUDGE; *WATER POLLUTION CONTROL; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 1898-1906P.

ABSTRACT: DESCRIBES A METHOD FOR ELECTROLYTICALLY REMOVING HEAVY-METAL IONS IN WASTEWATER; THE ELECTROLYTIC FERRITE FORMATION METHOD WHICH INVOLVES THE REMOVAL OF COEXISTING HEAVY-METAL IONS SUCH AS FERRITES AND PHOSPHATES; AND THE MAGNETIC SEPARATION OF MAGNETIZED FERRITES FROM SLUDGE.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION; V52 N7

IRIS ACCESSION NUMBER: EW005062

PUBLICATION DATE: JUL 80

TITLE: TRACE ORGANICS REMOVAL BY ADVANCED WASTEWATER TREATMENT.

PERSONAL AUTHOR: MCCARTY, PERRY L.; REINHARD, MARTIN

DESCRIPTOR: CALIFORNIA; *DESIGN; *GROUND WATER; OPERATIONS (WASTEWATER); *ORGANIC COMPOUNDS; *SEAWATER INTRUSION; *STATISTICAL ANALYSIS; WATER POLLUTION CONTROL; *WATER INJECTION; *WASTEWATER TREATMENT; WATER SUPPLY

DESCRIPTIVE NOTE: 1907-1922P.

ABSTRACT: PROVIDES RESULTS OF A STATISTICAL ANALYSIS OF DATA COLLECTED OVER A THREE YEAR PERIOD CONCERNING THE OPERATION OF AN ADVANCED WASTEWATER TREATMENT PLANT. THIS PLANT IS DESIGNED TO IMPROVE THE QUALITY OF BIOLOGICALLY TREATED MUNICIPAL WASTEWATER SO THAT IT CAN BE USED AS THE INJECTION WATER TO PREVENT SEAWATER INTRUSION INTO THE GROUND WATERS OF ORANGE COUNTY, CALIFORNIA.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION; V52 N7

IRIS ACCESSION NUMBER: EW005063

PUBLICATION DATE: JUL 80

TITLE: TREATMENT PLANT ODORS AND NEIGHBORS: A CASE HISTORY.

PERSONAL AUTHOR: LUTHY, RICHARD F.; AND OTHERS

DESCRIPTOR: CALIFORNIA; *CASE STUDIES; DESIGN; *FACILITIES; *ODORS; *OPERATIONS (WASTEWATER); *PUBLIC RELATIONS; *WASTE DISPOSAL; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 1923-1930P.

ABSTRACT: PRESENTS A CASE HISTORY IN WHICH INCREASING COMPLAINTS ABOUT WASTEWATER TREATMENT PLANT ODORS LED TO A DECISION TO IMPLEMENT MAJOR PLANT MODIFICATIONS AND CHANGES IN OPERATING PROCEDURES. ALSO DESCRIBES THE STEPS IN ESTABLISHING A CITIZENS ADVISORY COMMITTEE.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION; V52 N7

IRIS ACCESSION NUMBER: EW005064

PUBLICATION DATE: JUL 80

TITLE: HYDRAULIC MODEL FOR BIOLOGICAL REACTORS: APPLICATION TO ACTIVATED SLUDGE.

PERSONAL AUTHOR: TUAN, V. A.; AND OTHERS

DESCRIPTOR: ACTIVATED SLUDGE; *BIOLOGICAL TREATMENT; *MODELS; *OPERATIONS (WASTEWATER); *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 1931-1936P.

ABSTRACT: CONSIDERS AN ACTIVATED SLUDGE MODEL OF TANKS IN SERIES WITH EXCHANGE FLOW BETWEEN ADJACENT COMPONENT TANKS. PRESENTS RESPONSE CURVES TO DIFFERENT VALUES OF MODEL PARAMETERS, AND METHODS FOR PREDICITING THE PERFORMANCE OF THE PARTIALLY MIXED ACTIVATED SLUDGE PROCESS USING AN AVAILABLE KINETIC MODEL FOR RATES OF BIOMASS GROWTH AND SUBSTRATE REMOVAL.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION; V52 N7

IRIS ACCESSION NUMBER: EW005065

PUBLICATION DATE: JUL 80

TITLE: TOTAL ENERGY CONCEPT AT THE JOINT WATER POLLUTION CONTROL PLANT.

PERSONAL AUTHOR: ADAMS, GREGORY M.; AND OTHERS

DESCRIPTOR: AIR QUALITY; CALIFORNIA; DESIGN; *ENERGY REQUIREMENTS; *FACILITIES; *OPERATIONS (WASTEWATER); *SECONDARY TREATMENT; *WATER POLLUTION CONTROL; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 1937-1946P.

ABSTRACT: DISCUSSES THE ENERGY IMPLICATIONS OF SECONDARY TREATMENT AT THE JOINT WATER POLLUTION CONTROL PLANT IN CARSON, CALIFORNIA, WHICH COLLECTS AND COMBINES DOMESTIC, COMMERCIAL, AND INDUSTRIAL WASTEWATER FLOWS FOR A MAJOR PORTION OF THE LOS ANGELES BASIN. AIR QUALITY IMPLICATIONS ARE ALSO DISCUSSED.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION; V52 N7

IRIS ACCESSION NUMBER: EW005066

PUBLICATION DATE: JUL 80

TITLE: ENUMERATION OF COLIFORMS FROM STREAMS CONTAINING ACID MINE WATER.

PERSONAL AUTHOR: DOUBLE, MARK L.; BISSONNETTE, GARY K.

DESCRIPTOR: ANALYTICAL TECHNIQUES; *ACID MINE DRAINAGE; *COLIFORM DETERMINATION; *LABORATORY TECHNIQUES; *MEASUREMENT; *SAMPLING; *WATER POLLUTIN CONTROL; WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 1947-1952P.

ABSTRACT: PRESENTS RESULTS OF STUDIES THAT CRITICALLY EXAMINE THE EFFECTIVENESS OF PRESENTLY AVAILABLE RECOVERY TECHNIQUES FOR THE ENUMERATION OF THE TOTAL COLIFORM GROUP FROM ACID MINE WATER ENVIRONMENTS. TWO METHODS, MPN (MOST PROBABLE NUMBER) AND MF (MEMBRANE FILRATION), ARE COMPARED.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION; V52 N7

IRIS ACCESSION NUMBER: EW005067

PUBLICATION DATE: JUL 80

TITLE: ANAEROBIC ATTACHED-FILM EXPANDED-BED REACTOR TREATMENT.

PERSONAL AUTHOR: SWITZENBAUM, MICHAEL S.; JEWELL, WILLIAM J.

DESCRIPTOR: *ANAEROBIC TREATMENT; DESIGN; *ORGANIC COMPOUNDS; *PROCESS CONTROL; *SLUDGE TREATMENT; *WASTEWATER TREATMENT; *WASTE DISPOSAL

DESCRIPTIVE NOTE: 1953-1965P.

ABSTRACT: PRESENTS (1)AN ANALYSIS OF THE PROCESS VARIABLES THAT AFFECT THE PERFORMANCE OF AN ANAEROBIC ATTACHED FILM EXPANDED BED (AAFEB) TREATING DILUTE ORGANIC WASTES AND (2)TWO SIMPLIFIED FIRST-ORDER EQUATIONS RELATING THE PROCESS EFFICIENCY TO THE NET SPECIFIC GROWTH RATE OF THE FILM AND SPECIFIC SUBSTRATE UTILIZATION RATE.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION; V52 N7

IRIS ACCESSION NUMBER: EW005068

PUBLICATION DATE: JUL 80

TITLE: DYNAMIC MODELING OF INDUSTRIAL WASTEWATER TREATMENT PLANT DATA.

PERSONAL AUTHOR: HANSEN, JAMES L.; AND OTHERS

DESCRIPTOR: *ACTIVATED SLUDGE; *CASE STUDIES; CHEMICAL INDUSTRY; *DATA ANALYSIS; *FACILITIES; *INDUSTRIAL WASTES; INDUSTRIAL WATER; MANUFACTURING INDUSTRY; *MODELS; *OPERATIONS (WASTEWATER); PROCESS CONTROL; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 1966-1975P.

ABSTRACT: DESCRIBES AN EXAMPLE IN WHICH MULTIPLE LINEAR

REGRESSION WAS USED TO DEVELOP DISCRETE DYNAMIC MODELS FOR ACTIVATED SLUDGE SYSTEMS TREATING COMPLEX ORGANIC CHEMICAL MANUFACTURING WASTES.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION; V52 N7

IRIS ACCESSION NUMBER: EW005069

PUBLICATION DATE: JUL 80

TITLE: PHYSIOLOGICAL ALTERATIONS OF VEGETATIVE MICROORGANISMS RESULTING FROM CHLORINATION.

PERSONAL AUTHOR: HAAS, CHARLES N.; ENGELBRECHT, RICHARD S.

DESCRIPTOR: ACID FAST BACTERIA; BIOCHEMISTRY; CELL BIOLOGY; *COLIFORM BACTERIA; CHLORINE; *CHLORINATION; DISINFECTION; *YEASTS

DESCRIPTIVE NOTE: 1976-1989P.

ABSTRACT: DESCRIBES EXPERIMENTS AND THEIR RESULTS DESIGNED TO ASCERTAIN THE MECHANISM OF INACTIVATION OF THREE MICROORGANISMS, USING HOCL AS THE GERMICIDE, AS WELL AS WHETHER THE INCREASED RESISTANCE OF ACIDFAST AND YEAST ORGANISMS COULD BE RELATED TO KNOWN FEATURES OF THEIR CELL STRUCTURE OR BIOCHEMISTRY.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION; V52 N7

IRIS ACCESSION NUMBER: EW005070

PUBLICATION DATE: JUL 80

TITLE: STOICHIOMETRY AND KINETICS OF BIOLOGICAL WASTE TREATMENT.

PERSONAL AUTHOR: IRVINE, R. L.; AND OTHERS

DESCRIPTOR: *BIOLOGICAL TREATMENT; *DENITRIFICATION; *KINETICS; *MODELS; NITROGEN; *STOICHIOMETRY; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 1997-2006P.

ABSTRACT: PRESENTS A FUNDAMENTAL PROCEDURE FOR DEVELOPING A REACTION SCHEME, HANDLING KINETIC EXPRESSIONS, AND REDUCING THE SYSTEM OF BIOLOGICAL WASTE TREATMENT TO IMPORTANT REACTIONS AND COMPONENTS. ALSO APPLIES THE PROCEDURE TO THE SPECIFIC CASE OF BIOLOGICAL NITROGEN REMOVAL.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION; V52 N7

IRIS ACCESSION NUMBER: EW005071

PUBLICATION DATE: JUL 80

TITLE: DISINFECTION OF MUNICIPAL WASTEWATER EFFLUENTS WITH ULTRAVIOLET LIGHT.

PERSONAL AUTHOR: SEVERIN, B. F.

DESCRIPTOR: COLIFORM BACTERIA; *DISINFECTION; *EFFLUENTS; PROCESS CONTROL; SECONDARY TREATMENT; *ULTRA VIOLET LIGHT; *WASTE WATER TREATMENT

DESCRIPTIVE NOTE: 2007-2018P.

ABSTRACT: SUMMARIZES THE APPLICATION OF A COMMERCIALLY AVAILABLE UV-LIGHT WATER STERILIZER TO THE DISINFECTION OF FECAL COLIFORM BACTERIA IN MUNICIPAL WASTEWATER EFFLUENTS. DATA IS PRESENTED FROM 15 EXPERIMENTS USING PRIMARY CLARIFIER EFFLUENT, SETTLED ACTIVATED SLUDGE EFFLUENT, ACTIVATED SLUDGE EFFLUENT WITH WASTE ACTIVATED SOLIDS ADDED, TERTIARY SAND FILTER EFFLUENT, MIXED-MEDIA FILTRATION EFFLUENT, AND TRICKLING FILTER EFFLUENT.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION; V52 N7

IRIS ACCESSION NUMBER: EW005075

TITLE: BEHAVIOR MANAGEMENT FOR SAFETY.

PERSONAL AUTHOR: MILLER, LAWRENCE M.

DESCRIPTOR: *AUDIOVISUAL AIDS; *BEHAVIOR MANAGEMENT; VIDEOCASSETTES; *HEALTH; *LEGISLATION; *MANAGEMENT; *OCCUPATIONAL SAFETY; *REGULATIONS; *SAFETY

DESCRIPTIVE NOTE: PRICE: $300.00

ABSTRACT: THE APPLICATION OF BEHAVIOR MANAGEMENT TO INDIVIDUALS AND ORGANIZATIONS CAN BE UTILIZED IN SAFETY SITUATIONS. BEHAVIOR MANAGEMENT INVOLVES A NON-THEORETICAL APPROACH BASED ON WHAT WORKS.

AVAILABILITY: AMCEE, DEPT. OSHA, GEORGIA INSTITUTE OF TECHNOLOGY, ATLANTA, GEORGIA 30332

IRIS ACCESSION NUMBER: EW005079

PUBLICATION DATE: DEC 79

TITLE: BACTERIA: WATER QUALITY STANDARDS CRITERIA DIGEST A COMPILATION OF STATE/FEDERAL CRITERIA.

DESCRIPTOR: *BACTERIA; *COLIFORM BACTERIA; FEDERAL REGULATIONS; *STANDARDS; SURFACE WATERS; STATE REGULATIONS; *WATER QUALITY; *WATER POLLUTION CONTROL

DESCRIPTIVE NOTE: 33P.

ABSTRACT: THIS DIGEST WAS COMPILED TO PROVIDE GENERAL INFORMATION TO THE PUBLIC AS WELL AS TO FEDERAL, STATE, AND LOCAL OFFICIALS, IT CONTAINS EXCERPTS FROM THE INDIVIDUAL STATE-FEDERAL WATER QUALITY STANDARDS ESTABLISHING POLLUTANT SPECIFIC CRITERIA FOR NAVIGABLE SURFACE WATERS. FECAL COLIFORM BACTERIAL CRITERIA, WHICH ARE THE SUBJECT OF THIS DIGEST, ARE SET TO PROTECT HUMAN HEALTH FROM DISEASES ASSOCIATED WITH USING CONTAMINATED WATER.

AVAILABILITY: UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, OFFICE OF WATER PLANNING AND STANDARD, WASHING, D.C. 20460

INSTITUTION NAME: ENVIRONMENTAL PROTECTION AGENCY--UNITED STATES.

IRIS ACCESSION NUMBER: EW005080

PUBLICATION DATE: DEC 79

TITLE: ACIDITY--ALKALINITY (PH), WATER QUALITY STANDARDS CRITERIA DIGEST A COMPILATION OF STATE/FEDERAL CRITERIA.

DESCRIPTOR: *FEDERAL REGULATIONS; *PH; *STANDARDS; *STATE REGULATIONS; *WATER QUALITY; *WATER POLLUTION CONTROL

DESCRIPTIVE NOTE: 17P.

ABSTRACT: THIS DIGEST WAS COMPILED TO PROVIDE GENERAL INFORMATION TO THE PUBLIC AS WELL AS TO FEDERAL, STATE, AND LOCAL OFFICIALS. IT CONTAINS EXCERPTS FROM THE INDIVIDUAL STATE-FEDERAL WATER QUALITY STANDARDS ESTABLISHING POLLUTANT SPECIFIC CRITERIA FOR NAVIGABLE SURFACE WATERS. THIS DIGEST DEALS WITH PH AND ITS USE IN STATE WATER QUALITY CRITERIA.

AVAILABILITY: UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, OFFICE OF WATER PLANNING AND STANDARD, WASHINGTON, D.C. 20460

INSTITUTION NAME: UNITED STATES ENVIRONMENTAL PROTECTION AGENCY.

IRIS ACCESSION NUMBER: EW005084

PUBLICATION DATE: 74

TITLE: ENVIRONMENTAL GUIDEBOOK FOR CONSTRUCTION.

DESCRIPTOR: *AIR POLLUTION CONTROL; AIR QUALITY; *CONSTRUCTION; EXCAVATION; *ENVIRONMENTAL CRITERIA; ENVIRONMENTAL EFFECTS; *ENVIRONMENT; ECOLOGY; *GUIDELINES; *NOISE POLLUTION CONTROL; REFUSE DISPOSAL; *WATER POLLUTION CONTROL

DESCRIPTIVE NOTE: 61P. PRICE: $1.00

ABSTRACT: PROVIDES INFORMATION FOR CONSTRUCTION WORKERS ON HOW THEIR ACTIVITIES EFFECT THE ENVIRONMENT AND THE MEANS TO EMPLOY TO MINIMIZE THE ADVERSE EFFECTS. SUBJECTS INCLUDE: AIR QUALITY, WATER QUALITY, NOISE CONTROL, LAND CHARACTERISTIC PRESERVATION, EXCAVATION ACTIVITIES AND REFUSE DISPOSAL.

AVAILABILITY: SUPERINTENDENT OF DOCUMENTS, U.S. GOVERNMENT PRINTING OFFICE, WASHINGTON, D.C. 20402, AND BUREAU OF RECLAMATION, ENGINEERING AND RESEARCH CENTER, ATTN: CODE 922, DENVER FEDERAL CENTER, DENVER, COLO. 80225

INSTITUTION NAME: UNITED STATES DEPARTMENT OF THE INTERIOR AND BUREAU OF RECLAMATION.

IRIS ACCESSION NUMBER: EW005088

PUBLICATION DATE: APR 80

TITLE: TECHNICAL AND ECONOMIC REVIEW OF CONTROL METHODS FOR TOTAL DISSOLVED SOLIDS, SULFATES, CHLORIDES, IRON AND MANGANESE.

PERSONAL AUTHOR: HUFF, LINDA L.

DESCRIPTOR: COST EFFECTIVENESS; *CHLORIDES; *DISSOLVED SOLIDS; *ECONOMICS; *INDUSTRIES; *IRON; *MANGANESE; *MINING; *POLLUTION; *SULFATES; SOLIDS; *TECHNOLOGY; *WATER POLLUTION CONTROL

DESCRIPTIVE NOTE: 214P. DOC. NO. 80/06 PROJECT NO. 20.127

ABSTRACT: THE MINING INDUSTRY IN ILLINOIS INVOLVES BOTH UNDERGROUND AND SURFACE MINES WHICH HAVE OVER 150 WATER DISCHARGES. THE DISCHARGES FROM THESE SOURCES CAN PRESENT A SERIOUS WATER POLLUTION PROBLEM AND THEREFORE HAVE TO BE CONTROLLED. THIS REPORT REVIEWS 14 WATER POLLUTION ABATEMENT TECHNIQUES THAT ARE NECESSARY TO MEET WATER QUALITY STANDARDS, FROM BOTH AN ECONOMIC AND TECHNICAL STANDPOINT.

AVAILABILITY: ILLINOIS INSTITUTE OF NATURAL RESOURCES, 309 W. WASHINGTON STREET, CHICAGO, IL 60606

IRIS ACCESSION NUMBER: EW005091

PUBLICATION DATE: MAR 80

TITLE: BIOLOGICAL EFFECTS OF LEAD POLLUTION, VOLUME 2. 1978-FEBRUARY 1980.

PERSONAL AUTHOR: HARRISON, ELIZABETH A.

DESCRIPTOR: *ANNOTATED BIBLIOGRAPHIES; AIR POLLUTION; *BIOLOGICAL EFFECTS; BIBLIOGRAPHIES; CHEMICAL CONTAMINANTS; ENVIRONMENTAL IMPACT; ENVIRONMENTAL POLLUTION; HEAVY METALS; *LEAD; *POLLUTION; PUBLIC HEALTH; *TOXIC SUBSTANCES; WATER POLLUTION

DESCRIPTIVE NOTE: 100P. PRICE: $30.00

ABSTRACT: THE VOLUME CONTAINS SELECTED ABSTRACTS COVERING THE EFFECTS OF ENVIRONMENTAL LEAD CONTAMINATION ON PLANTS, ANIMALS, AND HUMANS. INCLUDED ARE REFERENCES WHICH CONCERN

THE DISTRIBUTION AND QUANTITIES OF LEAD IN VARIOUS PLANTS AND ANIMALS. (THIS UPDATED BIBLIOGRAPHY CONTAINS 99 ABSTRACTS, 48 OF WHICH ARE NEW TO THE PREVIOUS EDITION).

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW005092

PUBLICATION DATE: DEC 79

TITLE: SANITARY LANDFILLS, VOLUME 1. 1964-1977.

PERSONAL AUTHOR: HUNDEMANN, AUDREY S.

DESCRIPTOR: *ANNOTATED BIBLIOGRAPHIES; BIBLIOGRAPHIES; *DESIGN; ECONOMICS; COVENMENT POLICIES; *LANDFILLS; LAND USE; *LAND RECLAMATION; MUNICIPAL REFUSE; POLLUTION CONTROL; PUBLIC HEALTH; *SANITARY LANDFILLS; *SANITARY LANDFILL CRITERIA; SITE SELECTION; SEWAGE; *SLUDGE; *WASTE DISPOSAL

DESCRIPTIVE NOTE: 272P. PRICE: $30.00, PB80-802812

ABSTRACT: THE REPORTS CITED RELATE TO SANITARY LANDFILL CRITERIA, DESIGN, SITE SELECTION, GUIDELINES, URBAN AND RURAL LOCATIONS, AND LAND RECLAMATION. RESEARCH ON DISPOSAL OF MUNICIPAL REFUSE, SLUDGE SPOIL, SEWAGE SLUDGE, AND SLUDGES FROM POLLUTION CONTROL IN POWER PLANTS ARE COVERED. STUDIES ON ECONOMICS, GOVERNMENT POLICIES, MANAGEMENT, AND PUBLIC HEALTH ARE INCLUDED. GROUND WATER POLLUTION, LAND RECLAMATION, GASEOUS EMISSIONS, LEACHATE ANALYSIS, LANDFILL LINERS, ESTHETICS, AND MONITORING ARE DISCUSSED. LAND DISPOSAL OF HAZARDOUS MATERIALS IS EXCLUDED. (THIS UPDATED BIBLIOGRAPHY CONTAINS 272 ABSTRACTS, NONE OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION).

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW005093

PUBLICATION DATE: DEC 79

TITLE: SANITARY LANDFILLS, VOLUME 1. 1970-1977.

PERSONAL AUTHOR: HUNDEMANN, AUDREY S.

DESCRIPTOR: *ANNOTATED BIBLIOGRAPHIES; *BIBLIOGRAPHIES; *ENERGY; *FUELS; LAND USE; *LANDFILLS; MONITORING; *REFUSE DISPOSAL; *SANITARY LANDFILLS; SITE SELECTION; *WASTE DISPOSAL; *WATER POLLUTION

DESCRIPTIVE NOTE: 272P. PRICE: $30.00, PB80-802838

ABSTRACT: CITATIONS OF WORLDWIDE REPORTS ON REFUSE DISPOSAL IN SANITARY LANDFILLS ARE PRESENTED. STUDIES COVERED ARE SITE SELECTION, REFUSE PROCESSING, EARTH MOVING EQUIPMENT, AND MONITORING. THE MAJORITY OF THESE ABSTRACTS ARE CONCERNED WITH WATER POLLUTION AND GAS EVOLUTION AT DISPOSAL LOCATIONS. THE RECOVERY OF LANDFILL GAS FOR USE AS A FUEL IS DISCUSSED. LANDFILL DISPOSAL OF HAZARDOUS MATERIALS IS EXCLUDED. (THIS UPDATED BIBLIOGRAPHY CONTAINS 272 ABSTRACTS, NONE OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION).

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW005094

PUBLICATION DATE: DEC 79

TITLE: SANITARY LANDFILLS, VOLUME 2. 1978-NOVEMBER, 1979.

PERSONAL AUTHOR: HUNDEMANN, AUDREY S.

DESCRIPTOR: *ANNOTATED BIBLIOGRAPHIES; BIBLIOGRAPHIES; DESIGN; ECONOMICS; *FACILITIES; GROUNDWATER; *LAND USE; *LANDFILLS; POLLUTION CONTROL; PUBLIC HEALTH; SITE SELECTION; *SLUDGE; *WASTE DISPOSAL; *WASTEWATER TREATMENT; WATER POLLUTION

DESCRIPTIVE NOTE: 68P. PRICE: $30.00

ABSTRACT: THE REPORTS CITED RELATE TO SANITARY LANDFILL CRITERIA DESIGN, SITE SELECTION, GUIDELINES, URBAN AND RURAL LOCATIONS, AND LAND RECLAMATION. RESEARCH ON DISPOSAL OF MUNICIPAL REFUSE, SLUDGE SPOIL, SEWAGE SLUDGE, AND SLUDGES FROM POLLUTION CONTROL IN POWER PLANTS IN LANDFILLS IS INCLUDED. STUDIES ON ECONOMICS, GOVERNMENT POLICIES, MANAGEMENT, AND PUBLIC HEALTH ARE ALSO INCLUDED. GROUND WATER POLLUTION, LAND RECLAMATION, GASEOUS EMISSIONS, LEACHATE ANALYSIS, LANDFILL LINERS, ESTHETICS, AND MONITORING ARE DISCUSSED. LAND DISPOSAL OF HAZARDOUS MATERIALS IS EXCLUDED. (THIS UPDATED BIBLIOGRAPHY CONTAINS 68 ABSTRACTS, 35 OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION).

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW005095

PUBLICATION DATE: JAN 80

TITLE: WATER POLLUTION ANALYSIS AND DETECTION, VOLUME 3, 1977-1978.

PERSONAL AUTHOR: CAVAGNARO, DIANE M.

DESCRIPTOR: *ANNOTATED BIBLIOGRAPHIES; *ANALYTICAL TECHNIQUES; BIBLIOGRAPHIES; CHROMATOGRAPHY; CYANIDES; GAS CHROMATOGRAPHY; GASES; HEAVY METALS; *LABORATORY PROCEDURES; METALS; NEUTRON ACTIVATION ANALYSIS; POTENTIOMETRY; PESTICIDES; SAMPLING; SPECTROSCOPY; SEWAGE; *WASTEWATER; *WATER QUALITY; *WATER POLLUTION; *WATER ANALYSIS

DESCRIPTIVE NOTE: 309P. PRICE: $30.00

ABSTRACT: RESEARCH REPORTS ON WATER ANALYSIS TECHNIQUES ARE CITED. TOPICS INCLUDE TECHNIQUES SUCH AS MASS SPECTROSCOPY, INFARED SPECTROSCOPY, SPOT TESTS, POTENTIOMETRY, GAS CHROMATOGRAPHY, AND NEUTRON ACTIVATION ANALYSIS. THE POLLUTANTS THAT ARE COVERED ARE NUTRIENTS, HEAVY METALS, CYANIDES, DISSOLVED GASES, PESTICIDES, AND INDUSTRIAL WASTES. SOME ARE GENERAL STUDIES. OTHERS WERE UNDERTAKEN TO ANALYZE POLLUTANTS FROM VARIOUS MEDIA, SUCH AS FRESH WATER, SALT WATER, INDUSTRIAL WASTE STREAMS, AND SEWAGE EFFLUENTS. OIL POLLUTION DETECTION AND ANALYSIS ARE EXCLUDED. (THIS UPDATED BIBLIOGRAPHY CONTAINS 309 ABSTRACTS, NONE OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION).

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW005096

PUBLICATION DATE: MAR 80

TITLE: BACTERIAL POLLUTION OF WATER, VOLUME 2. MARCH, 1976-FEBRUARY, 1979.

PERSONAL AUTHOR: HARRISON, ELIZABETH A.

DESCRIPTOR: *ANNOTATED BIBLIOGRAPHIES; *BACTERIA; COLIFORM BACTERIA; EFFLUENTS; FOOD PROCESSING; *INDICATOR BACTERIA; *MICROBIOLOGY; MINES; SEWAGE; *WATER POLLUTION; *WATER QUALITY; WASTEWATER

DESCRIPTIVE NOTE: 238P. PRICE: $30.00

ABSTRACT: THESE SELECTED ABSTRACTS OF RESEARCH REPORTS COVER BACTERIA, ESPECIALLY COLIFORM BACTERIA, FOUND POLLUTING NATURAL BODIES OF WATER, MINE WATER, SEWAGE EFFLUENTS, AND WATER USED IN FOOD PROCESSING. (THIS UPDATED BIBLIOGRAPHY CONTAINS 238 ABSTRACTS, NONE OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION).

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW005097

PUBLICATION DATE: MAR 80

TITLE: BACTERIAL POLLUTION OF WATER, VOLUME 3. MARCH, 1979-FEBRUARY, 1980.

PERSONAL AUTHOR: HARRISON, ELIZABETH A.

DESCRIPTOR: BIBLIOGRAPHIES; *ANNOTATED BIBLIOGRAPHIES; *BACTERIOLOGY; COLIFORM BACTERIA; *BACTERIA; *EFFLUENTS; *FOOD PROCESSING; *INDUSTRIES; *MINES; *SEWAGE; *WATER POLLUTION; *WASTEWATER

DESCRIPTIVE NOTE: 63P. PRICE: $30.00

ABSTRACT: THESE SELECTED ABSTRACTS OF RESEARCH REPORTS COVER BACTERIA, ESPECIALLY COLIFORM BACTERIA, FOUND POLLUTING NATURAL BODIES OF WATER, MINE WATER, SEWAGE EFFLUENTS, AND WATER USED IN FOOD PROCESSING. (THIS BIBLIOGRAPHY CONTAINS 63 ABSTRACTS, ALL OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION).

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW005099

PUBLICATION DATE: DEC 79

TITLE: ACTIVATED SLUDGE TREATMENT, VOLUME 2. 1977-AUGUST, 1979.

PERSONAL AUTHOR: BROWN, ROBENA J.

DESCRIPTOR: *BIBLIOGRAPHIES; *ANNOTATED BIBLIOGRAPHIES; *ACTIVATED SLUDGE; AGRICULTURAL WASTES; *CHEMICAL REACTIONS; DESIGN; *INDUSTRIAL WASTES; MUNICIPAL WASTES; *OPERATIONS (WASTEWATER); *SLUDGE; *WASTEWATER TREATMENT; *WASTE DISPOSAL

DESCRIPTIVE NOTE: 125P. PRICE: $30.00

ABSTRACT: REPORTS ARE CITED THAT DEAL WITH ACTIVATED SLUDGE TREATMENT OF MUNICIPAL, INDUSTRIAL, AND AGRICULTURAL WASTES. THESE STUDIES COVER SUCH TOPICS AS PROCESS DESIGN, OPERATING PROCEDURES, PROCESS CHEMISTRY, AND THE EFFECTS OF VARIOUS WASTES ON THE ACTIVATED SLUDGE PROCESS. REPORTS DEALING ONLY WITH SLUDGE DISPOSAL ARE EXCLUDED. (THIS UPDATED BIBLIOGRAPHY CONTAINS 182 ABSTRACTS, 55 OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION).

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW005100

PUBLICATION DATE: DEC 79

TITLE: ACTIVATED SLUDGE TREATMENT, VOLUME 3. OCTOBER, 1977-AUGUST, 1979.

PERSONAL AUTHOR: BROWN, ROBENA J.

DESCRIPTOR: *ANNOTATED BIBLIOGRAPHIES; *ACTIVATED SLUDGE; *AGRICULTURAL WASTES; BIOCHEMISTRY; DESIGN; *INDUSTRIAL WASTES; MICROBIOLOGY; MUNICIPAL WASTES; *OPERATIONS (WASTEWATER); *SLUDGE; TECHNOLOGY; VIRUSES; *WASTEWATER TREATMENT; *WASTE DISPOSAL

DESCRIPTIVE NOTE: 265P. PRICE: $30.00

ABSTRACT: CITATIONS FROM THE WORLD WIDE ENGINEERING INDEX ON ACTIVATED SLUDGE TREATMENT OF MUNICIPAL INDUSTRIAL AND AGRICULTURAL WASTES ARE PRESENTED. REPORTS DEALING ONLY WITH SLUDGE DISPOSAL ARE EXCLUDED. THE SELECTION OF THE BEST TECHNOLOGY, BIOCHEMICAL PROCESSES, CONVERSION, DESIGN, DETERIORATION, MICROBIOLOGY, UTILIZATION, AND INACTIVATION OF VIRUSES ARE STUDIED.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW005101

PUBLICATION DATE: DEC 79

TITLE: POLLUTION AND ITS CONTROL IN THE PAPER AND PULP INDUSTRY. VOLUME 3. 1978-NOVEMBER, 1979.

PERSONAL AUTHOR: CAVAGNARO, DIANE M.

DESCRIPTOR: *ANNOTATED BIBLIOGRAPHIES; *AIR POLLUTION; *AIR POLLUTION CONTROL; ECONOMICS; ENVIRONMENTAL IMPACT; MONITORING; *PAPER INDUSTRY; *PULP INDUSTRY; RECYCLING; *SOLID WASTE POLLUTION; *SOLID WASTE POLLUTION CONTROL; *WATER POLLUTION; *WATER POLLUTION CONTROL; WASTEWATER; WASTE DISPOSAL

DESCRIPTIVE NOTE: 103P. PRICE: $30.00

ABSTRACT: THE CITED REPORTS FROM A WORLD WIDE LITERATURE SURVEY DISCUSS AIR, WATER, AND SOLID WASTE POLLUTION FROM THE PULP AND PAPER INDUSTRY. ECONOMIC WAYS TO RECYCLE EFFLUENTS, COST ESTIMATES, TYPES OF WASTE, DETECTION, SOCIOECONOMIC FACTORS, AND THE EFFECTS OF THE POLLUTION ON THE ENVIRONMENT ARE DISCUSSED. (THIS UPDATED BIBLIOGRAPHY CONTAINS 113 ABSTRACTS, 85 OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION).

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW005102

PUBLICATION DATE: JAN 80

TITLE: WATER POLLUTION ANALYSIS AND DETECTION, VOLUME 4. 1979-JANUARY, 1980.

PERSONAL AUTHOR: CAVAGNARO, DIANE M.

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *ANNOTATED BIBLIOGRAPHIES; BIBLIOGRAPHIES; CYANIDES; HEAVY METALS; INDUSTRIAL WASTES; *LABORATORY PROCEDURES; MONITORING; NUTRIENTS; PESTICIDES; SAMPLING; WATER QUALITY; *WATER ANALYSIS; *WATER POLLUTION CONTROL

DESCRIPTIVE NOTE: 162P. PRICE: $30.00

ABSTRACT: THIS BIBLIOGRAPHY CITES WATER ANALYSIS TECHNIQUES, SUCH AS MASS SPECTROSCOPY, INFARED SPECTROSCOPY, SPOT TESTS, POTENIOMETRY, GAS CHROMATOGRAPHY, AND NEUTRON ACTIVATION ANALYSIS. NUTRIENTS, DISSOLVED GASES, HEAVY METALS, CYANIDES, PESTICIDES, AND OTHER INDUSTRIAL WASTES ARE INCLUDED IN THE POLLUTANTS. OIL POLLUTION DETECTION AND ANALYSIS ARE EXCLUDED. (THIS UPDATED BIBLIOGRAPHY CONTAINS 162 ABSTRACTS, 145 OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION).

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW005105

PUBLICATION DATE: MAR 80

TITLE: WASTE TREATMENT: FRUIT, VEGETABLE, GRAIN AND BAKED GOOD INDUSTRIES.

PERSONAL AUTHOR: YOUNG, GILBERT C.

DESCRIPTOR: *BAKED GOODS INDUSTRIES; *EFFLUENTS; FOOD TECHNOLOGY; FOOD SCIENCE; *FRUIT INDUSTRY; *GRAIN INDUSTRY; *INDUSTRIAL WASTES; INDUSTRY; RECYCLING; WASTEWATER TREATMENT; *VEGETABLE INDUSTRY; *WASTE DISPOSAL; WATER POLLUTION CONTROL; *WASTE TREATMENT

DESCRIPTIVE NOTE: 104P. PRICE: $30.00

ABSTRACT: THE CITED STUDIES COVER THE TREATMENT OF EFFLUENTS AND OTHER WASTES IN THE FOOD INDUSTRY OTHER THAN BEVERAGE, DAIRY, POULTRY, MEAT AND SEAFOOD. INCLUDED ARE VEGETABLE, FRUIT, BAKERY, SUGAR, FEEDS AND GRAINS, CANNING, RICE, AND SIMILAR INDUSTRIES.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICES, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW005106

PUBLICATION DATE: DEC 79

TITLE: OIL WATER SEPARATORS--(CITATIONS FROM THE NTIS DATA BASE).

PERSONAL AUTHOR: LEHMANN, EDWARD J.

DESCRIPTOR: *ANNOTATED BIBLIOGRAPHIES; BALLAST WATER; BILGE WATER; *OIL WATER SEPARATORS; *OIL POLLUTION; *OIL POLLUTION CONTROL; *OIL SPILLS; *RESEARCH; *POLLUTION; *WATER POLLUTION CONTROL

DESCRIPTIVE NOTE: 148P. PRICE: $30.00

ABSTRACT: THE CITATIONS COVER FEDERALLY-SPONSORED RESEARCH ON OIL WATER SEPARATORS, PRIMARILY FOR OIL POLLUTION CONTROL. CENTRIFUGE SEPARATORS, COALESCERS, FILTERS AND SKIMMERS ARE INCLUDED. OIL RECOVERY FROM OIL SPILLS, AND SEPARATION FROM BALLAST AND BILGE WATER ARE ALSO CITED. THE OPERATION, TESTING, AND PERFORMANCE OF THIS EQUIPMENT IN THE LABORATORY AND IN THE FIELD ARE REPORTED. (THIS UPDATED BIBLIOGRAPHY CONTAINS 148 ABSTRACTS, 2 OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION).

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW005108
PUBLICATION DATE: JAN 80

TITLE: SEDIMENT WATER INTERACTION AND ITS EFFECTS UPON WATER QUALITY.

PERSONAL AUTHOR: CAVAGNARO, DIANE M.

DESCRIPTOR: *ANNOTATED BIBLIOGRAPHIES; BIOLOGICAL PROCESSES; *CHEMICAL REACTIONS; HEAVY METALS; NUTRIENT RECYCLING; PESTICIDES; *SEDIMENT; *WATER QUALITY; *WATER POLLUTION

DESCRIPTIVE NOTE: 233P. PRICE: $30.00

ABSTRACT: THE CITED RESEARCH COVERS THE RELEASE AND ABSORPTION OF CHEMICALS BY SEDIMENTS, AS IT RELATES TO WATER QUALITY. TOPICS INCLUDE NUTRIENT RECYCLING, ABSORPTION AND DESORPTION OF HEAVY METALS AND PESTICIDES, ION EXCHANGE AND EFFECTS UPON BIOLOGICAL PROCESSES. SALT WATER STUDIES HAVE BEEN EXCLUDED. (THIS UPDATED BIBLIOGRAPHY CONTAINS 233 ABSTRACTS, 35 OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION).

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW005109

PUBLICATION DATE: JAN 80

TITLE: SEWAGE FILTRATION.

PERSONAL AUTHOR: CAVAGNARO, DIANE M.

DESCRIPTOR: *ANNOTATED BIBLIOGRAPHIES; *BIBLIOGRAPHIES; ECONOMICS; *EVALUATION; FIBERS; *FILTRATION; *OPERATIONS (WASTEWATER); RECYCLING; *SEWAGE FILTRATION; SEWAGE; *WASTEWATER TREATMENT; WASTE DISPOSAL

DESCRIPTIVE NOTE: 280P. PRICE: $30.00

ABSTRACT: CITATIONS OF FEDERALLY-FUNDED RESEARCH ARE PRESENTED RELATIVE TO STUDIES ON CENTRIFUGAL FILTRATION, TRICKLING FILTERS, SAND FILTERS, MICROSTRAINERS, AND VACUUM FILTERS. COSTS AND PERFORMANCE EVALUATION AS RELATED TO FILTRATION ARE INCLUDED. (THIS UPDATED BIBLIOGRAPHY CONTAINS 280 ABSTRACTS, 46 OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION).

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW005110

PUBLICATION DATE: JAN 80

TITLE: SEWAGE FILTRATION. VOLUME 2. 1977-79.

PERSONAL AUTHOR: CAVAGNARO, DIANE M.
DESCRIPTOR: *ANNOTATED BIBLIOGRAPHIES; *BIBLIOGRAPHIES; BIOLOGICAL PROCESSES; BIOCHEMICAL OXYGEN DEMAND; FILTERS; *FILTRATION; FLOCCULATION; NITROGEN; *OPERATIONS (WASTEWATER); PHOSPHORUS; *SEWAGE FILTRATION; SEWAGE; *WASTEWATER TREATMENT; WASTE DISPOSAL

DESCRIPTIVE NOTE: 192P. PRICE: $30.00

ABSTRACT: INCLUDED ARE REPORTS ON SEWAGE FILTRATION FROM JOURNAL LITERATURE. STUDIES INCLUDE TRICKLING FILTERS, SAND FILTERS, CENTRIFUGAL FILTERS, AND VACUUM FILTERS. ALSO COVERED ARE ADDITIVES, FLOCCULATION, NITROGEN, PHOSPHORUS, BIOCHEMICAL OXYGEN DEMAND, AND BIOLOGICAL PROCESSES IN FILTRATION. (THIS UPDATED BIBLIOGRAPHY CONTAINS 192 ABSTRACTS, 34 OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION).

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICES, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW005111

PUBLICATION DATE: MAR 79

TITLE: CONCEPTUAL DESIGNS FOR WATER TREATMENT IN DEMONSTRATION PLANTS II. APPENDIX-DESIGN PROCEDURES.

PERSONAL AUTHOR: SEUFERT, FREDERICK B.; AND OTHERS

DESCRIPTOR: *AMMONIA; BOILERS; BIOLOGICAL TREATMENT; COOLING WATER; *DEMONSTRATION PLANTS; *DESIGN; HYDROGEN SULFIDE; *OPERATIONS (WASTEWATER); PHENOL; *WASTEWATER

DESCRIPTIVE NOTE: 213P. PRICE: $13.00, OR# FE-2635-72

ABSTRACT: THIS VOLUME CONTAINS THE DESIGN PROCEDURES THAT WERE DEVELOPED FOR TREATING WASTE IN SIX DEMONSTRATION PLANTS. THE TREATMENTS FOR EACH OF THE DESIGN PROCEDURES INCLUDED BIOLOGICAL TREATMENT, BOILER FEED TREATMENT, COOLING WATER CONTROL, METHODS OF AMMONIA SEPARATION AND RECOVERY, PHENOL REMOVAL PROCESSES AND REMOVAL OF HYDROGEN SULFIDE.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW005112

PUBLICATION DATE: JUL 79

TITLE: EVALUATION OF OPERATION AND MAINTENANCE FACTORS LIMITING BIOLOGICAL WASTEWATER TREATMENT PLANT PERFORMANCE.

PERSONAL AUTHOR: GRAY, ALBERT C.; AND OTHERS

DESCRIPTOR: *ACTIVATED SLUDGE; *EQUIPMENT; *FACILITIES; *INSTRUCTIONAL MATERIALS; *MAINTENANCE; *MANAGEMENT; *OPERATIONS (WASTEWATER); PLANT OPERATORS; *TRAINING;

*WASTEWATER TREATMENT; WATER QUALITY
DESCRIPTIVE NOTE: 149P. PRICE: $11.00

ABSTRACT: THE PURPOSES OF THIS RESEARCH STUDY WERE TO EVALUATE OPERATIONAL AND MAINTENANCE PROGRAMS AT MUNCIPAL BIOLOGICAL WASTEWATER FACILITIES; IDENTIFY ALL THE DEFICIENCES IN THE AREA OF DESIGN, OPERATION, MAINTENANCE AND ADMINISTRATION; AND TO DETERMINE HOW THE DEFICIENCIES COULD BE OVERCOME AND OPERATIONS COULD BE IMPROVED IN ORDER TO UPGRADE PLANT PERFORMANCE TO MEET STANDARDS. CONCLUSIONS AND RECOMMENDATIONS ARE BASED ON 1/2-TO-1-DAY SITE VISITS MADE TO 120 FACILITIES AND 3-TO-5 COMPREHENSIVE EVALUATIONS CONDUCTED AT 30 FACILITIES. OF 70 POTENTIAL PROBLEM AREAS EVALUATED, THE TEN HIGHEST RANKED WERE OPERATOR APPLICATION OF TREATMENT CONCEPTS AND TESTING TO PROCESS CONTROL, INFILTRATION/INFLOW, PROCESS CONTROL TESTING PROCEDURES, ADEQUACY OF OPERATIONS AND MAINTENANCE MANUAL, INDUSTRIAL LOADING, TRAINING, HYDRAULIC LOADING, TREATMENT UNDERSTANDING, PROCESS CONTROLLABILITY, AND SLUDGE TREATMENT.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW005115

PUBLICATION DATE: AUG 79

TITLE: MANUAL OF PRACTICE FOR PROTECTION AND CLEANUP OF SHORELINES: VOLUME II, IMPLEMENTATION GUIDE.

PERSONAL AUTHOR: FOGET, CARL R.; AND OTHERS

DESCRIPTOR: BEACHES; *COASTAL POLLUTION; *CLEANUP TECHNIQUES; DECISION MAKING; *GUIDES; INSTRUCTIONAL MATERIALS; *MANUALS; *OIL SPILLS; *OIL; OCEANOLOGY; POLLUTION; *SHORELINE PROTECTION; *WATER POLLUTION CONTROL

DESCRIPTIVE NOTE: 143P. PRICE: $10.00, OR# PB80-108848

ABSTRACT: THE PURPOSE OF THIS MANUAL IS TO PROVIDE THE FIELD USER WITH A SYSTEMATIC, EASY TO APPLY METHODOLOGY THAT CAN BE USED TO ASSESS THE THREAT OF AN OIL SPILL AND SELECT THE MOST APPROPRIATE PROTECTION AND CLEAN-UP TECHNIQUES. THIS MANUAL IS STRUCTURED TO PROVIDE A DECISION MAKING GUIDE TO ENABLE THE USER TO DETERMINE, FOR A GIVEN OIL SPILL SITUATION, WHICH PROTECTION AND CLEANUP TECHNIQUE WOULD BE MOST EFFECTIVE FOR A GIVEN SHORELINE TYPE. A DETAILED DISCUSSION OF THE FACTORS INVOLVED IN DECISION MAKING PROCESS ARE GIVEN AND INCLUDE OIL CHARACTERISTICS, BEHAVIOR AND MOVEMENT OF OIL, SHORELINE CHARACTERISTICS AND SENSITIVITY, PROTECTION AND CLEANUP PRIORITIES, IMPLEMENTATION REQUIREMENTS, AND IMPACTS ASSOCIATED WITH CLEANUP OPERATIONS. THE MANUAL ALSO PRESENTS CRITERIA FOR TERMINATING CLEANUP OPERATIONS AND DISCUSSION ON HANDLING OF OILY WASTES.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW005116
PUBLICATION DATE: AUG 79

TITLE: MANUAL OF PRACTICE FOR PROTECTION AND CLEANUP OF SHORELINES: VOLUME I, DECISION GUIDE.

PERSONAL AUTHOR: FOGET, CARL R.; AND OTHERS

DESCRIPTOR: BEACHES; *COASTAL POLLUTION; *CLEANUP TECHNIQUES; *DECISION MAKING; *GUIDES; *INSTRUCTIONAL MATERIALS; *MANUALS; *OIL SPILLS; *OIL; *OCEANOLOGY; POLLUTION; *SHORELINE PROTECTION; *WATER POLLUTION CONTROL

DESCRIPTIVE NOTE: 111P. PRICE: $9.00, OR# PB80-108830

ABSTRACT: THE PURPOSE OF THIS MANUAL IS TO PROVIDE THE USER WITH A SYSTEMATIC, EASY TO APPLY METHODOLOGY THAT CAN BE USED TO ASSESS THE THREAT OF AN OIL SPILL AND SELECT THE MOST APPROPRIATE PROTECTION AND CLEANUP TECHNIQUES. THIS MANUAL IS STRUCTURED TO PROVIDE A DECISION MAKING GUIDE TO ENABLE THE USER TO DETERMINE, FOR A GIVEN OIL SPILL SITUATION, WHICH PROTECTION AND CLEANUP TECHNIQUES WOULD BE MOST EFFECTIVE FOR A SPECIFIC SHORELINE TYPE. A DETAILED DISCUSSION OF THE FACTORS INVOLVED IN THE DECISION MAKING PROCESS ARE GIVEN AND INCLUDE OIL CHARACTERISTICS, BEHAVIOR AND MOVEMENT OF OIL, SHORELINE CHARACTERIZATION AND SENSITIVITY, PROTECTION AND CLEANUP PRIORITIES, IMPLEMENTATION REQUIREMENTS, AND IMPACTS ASSOCIATED WITH CLEANUP OPERATIONS. THE MANUAL ALSO PRESENTS CRITERIA FOR TERMINATING CLEANUP OPERATIONS AND DISCUSSION ON HANDLING OF OILY WASTES.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW005118

PUBLICATION DATE: AUG 79

TITLE: MOVEMENT OF HAZARDOUS SUBSTANCES IN SOIL. A BIBLIOGRAPHY. VOLUME I. SELECTED METALS.

PERSONAL AUTHOR: COPEHAVER, EMILY D.; WILKINSON, BENITA K.

DESCRIPTOR: *ANNOTATED BIBLIOGRAPHIES; *HAZARDOUS SUBSTANCES; LAND APPLICATION; *METALS; ORGANIC COMPOUNDS; *SOIL; *WASTE DISPOSAL

DESCRIPTIVE NOTE: 144P. PRICE: $11.00, OR# PB80-113103

ABSTRACT: THIS BIBLIOGRAPHY IS INTENDED FOR USE BY PERSONNEL CONCERNED, EITHER VIA RESEARCH OR MANAGEMENT, WITH THE DISPOSAL OF HAZARDOUS WASTES, OTHER THAN SEWAGE SLUDGE, ON LAND. IT IS THE RESULT OF A SEARCH OF RECENT LITERATURE (1970 THROUGH 1974) AND INCLUDES INFORMATION ON THE TRANSPORT, TRANSFORMATION, AND SOIL RETENTION OF ARSENIC, ASBESTOS, BERYLLIUM, CADMIUM, CHROMIUM, COPPER, CYANIDE, LEAD, MERCURY, SELENIUM, ZINC, HALOGENATED HYDROCARBONS, PESTICIDES AND OTHER HAZARDOUS SUBSTANCES. THIS VOLUME CONTAINS ALL THE HAZARDOUS SUBSTANCES STUDIED EXCEPT PESTICIDES.

IRIS ACCESSION NUMBER: EW005108
PUBLICATION DATE: JAN 80

TITLE: SEDIMENT WATER INTERACTION AND ITS EFFECTS UPON WATER QUALITY.

PERSONAL AUTHOR: CAVAGNARO, DIANE M.

DESCRIPTOR: *ANNOTATED BIBLIOGRAPHIES; BIOLOGICAL PROCESSES; *CHEMICAL REACTIONS; HEAVY METALS; NUTRIENT RECYCLING; PESTICIDES; *SEDIMENT; *WATER QUALITY; *WATER POLLUTION

DESCRIPTIVE NOTE: 233P. PRICE: $30.00

ABSTRACT: THE CITED RESEARCH COVERS THE RELEASE AND ABSORPTION OF CHEMICALS BY SEDIMENTS, AS IT RELATES TO WATER QUALITY. TOPICS INCLUDE NUTRIENT RECYCLING, ABSORPTION AND DESORPTION OF HEAVY METALS AND PESTICIDES, ION EXCHANGE AND EFFECTS UPON BIOLOGICAL PROCESSES. SALT WATER STUDIES HAVE BEEN EXCLUDED. (THIS UPDATED BIBLIOGRAPHY CONTAINS 233 ABSTRACTS, 35 OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION).

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW005109

PUBLICATION DATE: JAN 80

TITLE: SEWAGE FILTRATION.

PERSONAL AUTHOR: CAVAGNARO, DIANE M.

DESCRIPTOR: *ANNOTATED BIBLIOGRAPHIES; *BIBLIOGRAPHIES; ECONOMICS; *EVALUATION; FIBERS; *FILTRATION; *OPERATIONS (WASTEWATER); RECYCLING; *SEWAGE FILTRATION; SEWAGE; *WASTEWATER TREATMENT; WASTE DISPOSAL

DESCRIPTIVE NOTE: 280P. PRICE: $30.00

ABSTRACT: CITATIONS OF FEDERALLY-FUNDED RESEARCH ARE PRESENTED RELATIVE TO STUDIES ON CENTRIFUGAL FILTRATION, TRICKLING FILTERS, SAND FILTERS, MICROSTRAINERS, AND VACUUM FILTERS. COSTS AND PERFORMANCE EVALUATION AS RELATED TO FILTRATION ARE INCLUDED. (THIS UPDATED BIBLIOGRAPHY CONTAINS 280 ABSTRACTS, 46 OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION).

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW005110

PUBLICATION DATE: JAN 80

TITLE: SEWAGE FILTRATION. VOLUME 2. 1977-79.

PERSONAL AUTHOR: CAVAGNARO, DIANE M.
DESCRIPTOR: *ANNOTATED BIBLIOGRAPHIES; *BIBLIOGRAPHIES; BIOLOGICAL PROCESSES; BIOCHEMICAL OXYGEN DEMAND; FILTERS; *FILTRATION; FLOCCULATION; NITROGEN; *OPERATIONS (WASTEWATER); PHOSPHORUS; *SEWAGE FILTRATION; SEWAGE; *WASTEWATER TREATMENT; WASTE DISPOSAL

DESCRIPTIVE NOTE: 192P. PRICE: $30.00

ABSTRACT: INCLUDED ARE REPORTS ON SEWAGE FILTRATION FROM JOURNAL LITERATURE. STUDIES INCLUDE TRICKLING FILTERS, SAND FILTERS, CENTRIFUGAL FILTERS, AND VACUUM FILTERS. ALSO COVERED ARE ADDITIVES, FLOCCULATION, NITROGEN, PHOSPHORUS, BIOCHEMICAL OXYGEN DEMAND, AND BIOLOGICAL PROCESSES IN FILTRATION. (THIS UPDATED BIBLIOGRAPHY CONTAINS 192 ABSTRACTS, 34 OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION).

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICES, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW005111

PUBLICATION DATE: MAR 79

TITLE: CONCEPTUAL DESIGNS FOR WATER TREATMENT IN DEMONSTRATION PLANTS II. APPENDIX-DESIGN PROCEDURES.

PERSONAL AUTHOR: SEUFERT, FREDERICK B.; AND OTHERS

DESCRIPTOR: *AMMONIA; BOILERS; BIOLOGICAL TREATMENT; COOLING WATER; *DEMONSTRATION PLANTS; *DESIGN; HYDROGEN SULFIDE; *OPERATIONS (WASTEWATER); PHENOL; *WASTEWATER

DESCRIPTIVE NOTE: 213P. PRICE: $13.00, OR# FE-2635-72

ABSTRACT: THIS VOLUME CONTAINS THE DESIGN PROCEDURES THAT WERE DEVELOPED FOR TREATING WASTE IN SIX DEMONSTRATION PLANTS. THE TREATMENTS FOR EACH OF THE DESIGN PROCEDURES INCLUDED BIOLOGICAL TREATMENT, BOILER FEED TREATMENT, COOLING WATER CONTROL, METHODS OF AMMONIA SEPARATION AND RECOVERY, PHENOL REMOVAL PROCESSES AND REMOVAL OF HYDROGEN SULFIDE.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW005112

PUBLICATION DATE: JUL 79

TITLE: EVALUATION OF OPERATION AND MAINTENANCE FACTORS LIMITING BIOLOGICAL WASTEWATER TREATMENT PLANT PERFORMANCE.

PERSONAL AUTHOR: GRAY, ALBERT C.; AND OTHERS

DESCRIPTOR: *ACTIVATED SLUDGE; *EQUIPMENT; *FACILITIES; *INSTRUCTIONAL MATERIALS; *MAINTENANCE; *MANAGEMENT; *OPERATIONS (WASTEWATER); PLANT OPERATORS; *TRAINING;

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW005122

PUBLICATION DATE: 72

TITLE: WATER POLLUTION IN THE PULP AND PAPER INDUSTRY. I. GENERAL AND IN-PLANT MODIFICATIONS.

PERSONAL AUTHOR: WEINER, JACK AND ROTH, LILLIAN

DESCRIPTOR: *BIBLIOGRAPHIES; *CHEMISTRY; *DESIGN; EFFLUENTS; *FACILITIES; LEGISLATION; PLANT DESIGN; *PAPER INDUSTRY; *PLANT MODIFICATIONS; RECYCLING; REGULATIONS; TECHNOLOGY; *WASTEWATER TREATMENT; *WATER POLLUTION; *WATER POLLUTION CONTROL

DESCRIPTIVE NOTE: 127P. PRICE: $30.00

ABSTRACT: THIS BIBLIOGRAPHY INCLUDES REFERENCES WHICH REPORT FEDERAL AND STATE LEGISLATION, SUMMARIES OF CONFERENCES, REVIEWS, MONOGRAPHS, LECTURES, AND OTHER ARTICLES OF GENERAL INTEREST. IN-PLANT MODIFICATIONS REFER TO THOSE CHANGES IN PULPING PROCEDURES, PLANT DESIGN, WATER REUSE, AND THE LIKE, THAT REDUCE THE AMOUNT OF EFFLUENT THAT REQUIRES DISPOSAL.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW005123

PUBLICATION DATE: 72

TITLE: WATER POLLUTION IN THE PULP AND PAPER INDUSTRY. II. TESTING METHODS.

PERSONAL AUTHOR: WEINER, JACK AND ROTH, LILLIAN

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *BIBLIOGRAPHIES; *CHEMISTRY; *CHEMICAL ANALYSIS; *EFFLUENTS; *LABORATORY PROCEDURES; MEASUREMENT; *PAPER INDUSTRY; SAMPLING; *WATER POLLUTION; *WATER POLLUTION CONTROL

DESCRIPTIVE NOTE: 124P. PRICE: $30.00

ABSTRACT: THIS BIBLIOGRAPHY INCLUDES REFERENCES TO CHEMICAL METHODS OF ANALYSIS FOR BOTH ORGANIC AND INORGANIC COMPOUNDS AND BIOASSAY METHODS.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW005124

PUBLICATION DATE: 72

TITLE: WATER POLLUTION IN THE PULP AND PAPER INDUSTRY. III. STREAM RESPONSE.

PERSONAL AUTHOR: WEINER, JACK AND ROTH, LILLIAN

DESCRIPTOR: *ANIMALS; *BIBLIOGRAPHIES; EFFLUENTS; *ENVIRONMENTAL INFLUENCES; *OCEANOLOGY; *PAPER INDUSTRY; POLLUTION; *PLANTS; *RIVERS; *STREAMS; *WATER POLLUTION; *WATER POLLUTION CONTROL

DESCRIPTIVE NOTE: 140P. PRICE: $30.00

ABSTRACT: THIS BIBLIOGRAPHY INCLUDES THOSE REFERENCES WHICH REPORT THE EFFECT OF VARIOUS POLLUTANTS ON RIVERS, LAKES, THE OCEAN, AND THE FLORA AND FAUNA GROWING IN THESE BODIES OF WATER.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW005125

PUBLICATION DATE: 72

TITLE: WATER POLLUTION IN THE PULP AND PAPER INDUSTRY. IV. TREATMENT METHODS. A. PHYSICAL OPERATIONS.

PERSONAL AUTHOR: WEINER, JACK AND ROTH, LILLIAN

DESCRIPTOR: *BIBLIOGRAPHIES; *CHEMISTRY; EFFLUENTS; *OPERATIONS (WASTEWATER); *PHYSICAL TREATMENT; *PAPER INDUSTRY; *WASTEWATER TREATMENT; *WATER POLLUTION; *WATER POLLUTION CONTROL

DESCRIPTIVE NOTE: 159P. PRICE: $30.00

ABSTRACT: THIS BIBLIOGRAPHY INCLUDES REFERENCES WHICH REPORT ON SUCH ITEMS AS SEDIMENTATION, FLOTATION, FILTRATION, COAGULATION, ADSORPTION, SLUDGE PROPERTIES, GENERAL CONCENTRATION PROCESSES, SPECIAL CONCENTRATION PROCESSES AND OTHER PHYSICAL METHODS OF TREATMENT.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW005126

PUBLICATION DATE: 72

TITLE: WATER POLLUTION IN THE PULP AND PAPER INDUSTRY. IV. TREATMENT METHODS. B. BIOLOGICAL SYSTEMS.

PERSONAL AUTHOR: WEINER, JACK AND ROTH, LILLIAN

DESCRIPTOR: *BIOLOGICAL TREATMENT; BIBLIOGRAPHIES; *CHEMISTRY; EFFLUENTS; *INDUSTRY; *OPERATIONS (WASTEWATER);

*PAPER INDUSTRY; *WASTEWATER TREATMENT; *WATER POLLUTION; *WATER POLLUTION CONTROL

DESCRIPTIVE NOTE: 203P. PRICE: $30.00

ABSTRACT: THIS BIBLIOGRAPHY INCLUDES REFERENCES ON LAGOONS, BIOLOGICAL FILTERS, ACTIVATED SLUDGE, ANAEROBIC AND AEROBIC TREATMENT, FERMENTATION, DISPOSAL METHODS AND GENERAL POLLUTION STUDIES.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW005127

PUBLICATION DATE: 72

TITLE: WATER POLLUTION IN THE PULP AND PAPER INDUSTRY. IV. TREATMENT METHODS. C. CHEMICAL PROCESSES, GENERAL OBSERVATION, AND REPORTS.

PERSONAL AUTHOR: WEINER, JACK AND ROTH, LILLIAN

DESCRIPTOR: *BIBLIOGRAPHIES; *CHEMISTRY; *CHEMICAL PROCESSES; EFFLUENTS; *INDUSTRY; NUCLEAR RADIATION; *OPERATIONS (WASTEWATER); *PAPER INDUSTRY; *WASTEWATER TREATMENT; *WATER POLLUTION; *WATER POLLUTION CONTROL

DESCRIPTIVE NOTE: 113P. PRICE: $30.00

ABSTRACT: THIS BIBLIOGRAPHY INCLUDES REFERENCES ON COMBUSTION PROCESSES, PH, ADJUSTMENT OXIDATION-REDUCTION SYSTEMS, NUCLEAR RADIATION, OTHER SPECIAL METHODS AND GENERAL INFORMATION ABOUT METHODS AND MILL INSTALLATIONS.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW005129

PUBLICATION DATE: DEC 79

TITLE: STATUS ASSESSMENT OF TOXIC CHEMICALS: ACRYLONITRILE.

PERSONAL AUTHOR: BLACKWOOD, T. R.; AND OTHERS

DESCRIPTOR: *ACRYLONITRILES; CONTROL TECHNOLOGIES; ENVIRONMENTAL CONTAMINATORS; EMISSIONS; HEALTH HAZARDS; MANUFACTURING PROCESS; REGULATORY ACTIONS; *STATUS ASSESSMENT; *TOXIC CHEMICALS; WATER POLLUTION

DESCRIPTIVE NOTE: 29P. ORDER #PB80-146301

ABSTRACT: THIS REPORT IDENTIFIES THE SERVICES AND EFFECTS OF ENVIRONMENTAL CONTAMINATORS BY ACRYLONITRILE, AS WELL AS THE HEALTH HAZARDS RESULTING FROM SUCH CONTAMINATION. THE PRESENT MANUFACTURING PROCESSES, USES, CONTROL TECHNOLOGIES, AND REGULATORY ACTIONS ARE DESCRIBED, AND AREAS REQUIRING FURTHER STUDY ARE INDICATED.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161 PRICE: $6.00

IRIS ACCESSION NUMBER: EW005131

PUBLICATION DATE: DEC 79

TITLE: STATUS ASSESSMENT OF TOXIC CHEMICALS: ASBESTOS.

PERSONAL AUTHOR: ARCHER, S. R.; BLACKWOOD, T. R.

DESCRIPTOR: *ASBESTOS; AIR EMISSIONS; *ENVIRONMENTAL EFFECTS; HEALTH EFFECTS; *STATUS ASSESSMENT; TOXIC SUBSTANCES; *TOXIC CHEMICALS; *WATER POLLUTION CONTROL; *WATER POLLUTION

DESCRIPTIVE NOTE: 22P. PRICE: $6.00

ABSTRACT: THIS REPORT CONTAINS A STATUS ASSESSMENT OF THE AIR EMISSIONS, WATER POLLUTION, HEALTH EFFECTS, AND ENVIRONMENTAL SIGNIFICANCE OF ASBESTOS. THE STUDY WAS CONDUCTED TO PROVIDE A BETTER UNDERSTANDING OF THE DISTRIBUTION AND CHARACTERISTICS OF THE POLLUTANT.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW005132

PUBLICATION DATE: DEC 79

TITLE: STATUS ASSESSMENT OF TOXIC CHEMICALS: BENZENE.

PERSONAL AUTHOR: BLACKWOOD, T. R.; AND OTHERS

DESCRIPTOR: AIR EMISSIONS; *BENZENE; *ENVIRONMENTAL EFFECTS; HEALTH EFFECTS; ORGANIC COMPOUNDS; POLLUTION; *REGULATIONS; *STATUS ASSESSMENT; TOXIC SUBSTANCES; *TOXIC CHEMICALS; *WATER POLLUTION CONTROL; *WATER POLLUTION

DESCRIPTIVE NOTE: 36P. PRICE: $6.00

ABSTRACT: BENZENE IS ONE OF THE MOST UBIQUITOUS ORGANIC CHEMICALS, WIDELY EMPLOYED AS A SOLVENT, AS A FUEL COMPONENT, AND FOR THE SYNTHESIS OF OTHER ORGANIC CHEMICALS. THIS REPORT DETAILS THE EMISSION OF BENZENE FROM INDUSTRIAL SOURCES AND FROM THE LARGEST SOURCE OF ALL THE OPERATION OF MOTOR VEHICLES. DESCRIPTIONS OF THE HEALTH HAZARDS OF BENZENE EXPOSURE ARE INCLUDED, AND BOTH CURRENT AND ANTICIPATED REGULATIONS ARE LISTED. THE REPORT IS CONCLUDED WITH RECOMMENDATION OF AREAS FOR FURTHER STUDY.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW005134

PUBLICATION DATE: DEC 79

TITLE: STATUS ASSESSMENT OF TOXIC CHEMICALS: CADMIUM.

PERSONAL AUTHOR: BLACKWOOD, T. R.; AND OTHERS

DESCRIPTOR: AIR EMISSIONS; *CADMIUM; *ENVIRONMENTAL EFFECTS; HEALTH EFFECTS; METALS; POLLUTION; REGULATIONS; *STATUS ASSESSMENT; TOXIC SUBSTANCES; *TOXIC CHEMICALS; TRANSITION METALS; *WATER POLLUTION CONTROL; WATER POLLUTION

DESCRIPTIVE NOTE: 21P. PRICE: $6.00

ABSTRACT: THE PROCESSING, USES, AND PROPERTIES OF CADMIUM ARE DISCUSSED IN THE REPORT. THE EFFECTS, MAJOR SOURCES, AND AMOUNTS OF CADMIUM POLLUTANT ARE LISTED, ALONG WITH THE CONTROL TECHNOLOGY CURRENTLY AVAILABLE. REGULATORY ACTIONS TO DEAL WITH THE CADMIUM POLLUTION PROBLEM ARE EXPLAINED, AND AREAS REQUIRING FURTHER STUDY ARE IDENTIFIED.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW005135

PUBLICATION DATE: DEC 79

TITLE: STATUS ASSESSMENT OF TOXIC CHEMICALS: HEXACHLOROBENZENE.

PERSONAL AUTHOR: BLACKWOOD, T. R.; AND OTHERS

DESCRIPTOR: AIR EMISSIONS; *ENVIRONMENTAL EFFECTS; *HEXACHLOROBENZENE; HEALTH EFFECTS; POLLUTION; *STATUS ASSESSMENT; *TOXIC SUBSTANCES; *TOXIC CHEMICALS; *WATER POLLUTION CONTROL; WATER POLLUTION

DESCRIPTIVE NOTE: 19P. PRICE: $6.00

ABSTRACT: THE PROPERTIES, PRODUCTION PROCESSES, USES, AND EMISSION SOURCES, FOR HEXACHLOROBENZENE ARE EXPLAINED IN THIS REPORT. THE ENVIRONMENTAL EFFECTS, HEALTH HAZARDS, AND CURRENT CONTROL TECHNOLOGIES ARE DISCUSSED. THE PROBLEMS OF PAST HEXACHLOROBENZENE CONTAMINATION IS DISCUSSED AND AREAS REQUIRING FURTHER STUDY ARE POINTED OUT.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW005136

PUBLICATION DATE: DEC 79

TITLE: STATUS ASSESSMENT OF TOXIC CHEMICALS: LEAD.

PERSONAL AUTHOR: BLACKWOOD, T. R.; AND OTHERS

DESCRIPTOR: *AIR EMISSIONS; *ENVIRONMENTAL EFFECTS; HEALTH EFFECTS; *LEAD; POLLUTION; *STANDARDS; *STATUS ASSESSMENT; *TOXIC SUBSTANCES; *TOXIC CHEMICALS; *WATER POLLUTION CONTROL; *WATER POLLUTION

DESCRIPTIVE NOTE: 34P. PRICE: $6.00

ABSTRACT: THE USES OF LEAD AND THE SOURCES OF LEAD POLLUTION, (BOTH NATURAL AND MAN-MADE) ARE IDENTIFIED. LONG-RANGE PROJECTIONS CONCERNING LEAD USAGE ARE MADE AND PROPOSED NEW EMISSIONS STANDARDS ARE EXAMINED. THE CURRENT CONTROL TECHNOLOGY IS EXPLAINED AND AREAS FOR FUTURE STUDY ARE DELINEATED IN THE REPORT.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW005137

PUBLICATION DATE: DEC 79

TITLE: STATUS ASSESSMENT OF TOXIC CHEMICALS: MERCURY.

PERSONAL AUTHOR: BLACKWOOD, T. R.; AND OTHERS

DESCRIPTOR: AIR EMISSIONS; *ENVIRONMENTAL EFFECTS; HEALTH EFFECTS; *MERCURY; POLLUTION; *STATUS ASSESSMENT; *TOXIC SUBSTANCES; *TOXIC CHEMICALS; *TRANSITION METALS; *WATER POLLUTION CONTROL; WATER POLLUTION

DESCRIPTIVE NOTE: 23P. PRICE: $6.00 NOTE:OR#PB80-146384

ABSTRACT: THIS REPORT LISTS THE PROPERTIES, PRODUCTION SOURCES, AMOUNTS, AND USES OF MERCURY. MERCURY POLLUTION FIGURES, SOURCES, HEALTH EFFECTS, ENVIRONMENTAL SIGNIFICANCE, AND CONTROL TECHNOLOGIES ARE CITED. AREAS ARE LISTED WHERE INFORMATION IS LACKING OR FURTHER STUDY IS REQUIRED.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW005138

PUBLICATION DATE: DEC 79

TITLE: STATUS ASSESSMENT OF TOXIC CHEMICALS: PHOSPHATES.

PERSONAL AUTHOR: BLACKWOOD, T. R.; AND OTHERS

DESCRIPTOR: *ENVIRONMENTAL EFFECTS; *EUTROPHICATION; HEALTH EFFECTS; *PHOSPHATES; POLLUTION; *STATUS ASSESSMENT; *STANDARDS; *TOXIC SUBSTANCES; TOXIC CHEMICALS; *WATER POLLUTION; *WATER POLLUTION CONTROL

DESCRIPTIVE NOTE: 22P. PRICE: $6.00 NOTE:OR#PB80-146392

ABSTRACT: USES, SOURCES, AND QUANTITIES OF PHOSPHATES ARE DISCUSSED IN THIS REPORT, WITH PARTICULAR EMPHASIS ON THE

PROBLEM OF FRESHWATER EUTROPHICATION. RECOMENDED STANDARDS AND CURRENT CONTROL TECHNOLOGIES ARE REVIEWED. AREAS REQUIRING FURTHER STUDY ARE IDENTIFIED.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW005139

PUBLICATION DATE: DEC 79

TITLE: STATUS ASSESSMENT OF TOXIC CHEMICALS: POLYBROMINATED BIPHENYLS.

PERSONAL AUTHOR: BLACKWOOD, T. R.; AND OTHERS

DESCRIPTOR: *ENVIRONMENTAL EFFECTS; HEALTH EFFECTS; *POLYBROMINATED BIPHENYLS; POLLUTION; REGULATIONS; *STATUS ASSESSMENT; *TOXIC SUBSTANCES; TOXIC CHEMICALS; *WATER POLLUTION CONTROL; WATER POLLUTION

DESCRIPTIVE NOTE: 19P. PRICE: $6.00 NOTE:OR#PB80-146400

ABSTRACT: THE PROPERTIES, USES, PRODUCTION PROCESSES AND HISTORY OF POLYBROMINATED BIPHENYLS ARE DEALT WITH IN THIS REPORT. THE HEALTH AND ENVIRONMENTAL HAZARDS ASSOCIATED WITH POLYBROMINATED BIPHENYLS ARE EXAMINED. ALTHOUGH NO LONGER PRODUCED IN LARGE QUANTITIES, REGULATORY ACTION IS NECESSARY FOR THE CLEAN-UP OF RESIDUES AND FOR THE CONTROL OF ANY FURTHER PRODUCTION AND USE.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW005140

PUBLICATION DATE: DEC 79

TITLE: STATUS ASSESSMENT OF TOXIC CHEMICALS: POLYNUCLEAR AROMATIC HYDROCARBONS.

PERSONAL AUTHOR: BLACKWOOD, T. R.; AND OTHERS

DESCRIPTOR: *ENVIRNMENTAL EFFECTS; EFFLUENTS; HEALTH EFFECTS; *POLYNUCLEAR AROMATIC HYDROCARBONS; POLLUTION; REGULATIONS; *STATUS ASSESSMENT; *TOXIC SUBSTANCES; *TOXIC CHEMICALS; *WATER POLLUTION; *WATER POLLUTION CONTROL

DESCRIPTIVE NOTE: 33P. PRICE: $6.00 NOTE:OR#PB80-146418

ABSTRACT: THIS REPORT IDENTIFIES THE ORIGINS, APPLICATIONS, ENVIRONMENTAL EFFECTS, AND HEALTH EFFECTS OF POLYNUCLEAR AROMATIC HYDROCARBONS. WAYS TO REDUCE POLYNUCLEAR HYDROCARBON (PNA) EMISSIONS AND PROBLEMS ASSOCIATED WITH PNA DERIVED EFFLUENTS IN THE DYE INDUSTRY ARE DISCUSSED. FINALLY, VARIOUS REGULATORY ACTIONS ARE LISTED AND RECOMENDATIONS ARE MADE FOR FURTHER AREAS OF STUDY.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW005141

PUBLICATION DATE: DEC 79

TITLE: STATUS ASSESSMENT OF TOXIC CHEMICALS: TRICHLOROETHYLENE.

PERSONAL AUTHOR: BLACKWOOD, T. R.; AND OTHERS

DESCRIPTOR: COST EFFECTIVENESS; *ENVIRONMENTAL EFFECTS; HEALTH EFFECTS; POLLUTION; *REGULATIONS; *STATUS ASSESSMENT; *TOXIC SUBSTANCES; TOXIC CHEMICALS; *TRICHLOROETHYLENE; *WATER POLLUTION; *WATER POLLUTION CONTROL

DESCRIPTIVE NOTE: 24P. PRICE: $6.00 NOTE: OR#PB80-146426

ABSTRACT: THE PRODUCTION PROCESSES, USES, AND PROPERTIES OF TRICHLOROETHYLENE ARE REVEALED IN THIS REPORT. THE SOURCES AND THE AMOUNTS OF TRICHLOROETHYLENE POLLUTION ARE IDENTIFIED AS WELL AS THE HEALTH EFFECTS AND ENVIRONMENTAL SIGNIFICANCE. CURRENT CONTROL TECHNOLOGIES ARE IDENTIFIED, ALONG WITH ASSESSMENTS ON THEIR COST AND EFFECTIVENESS. RECENT REGULATORY ACTIONS ARE EXPLAINED AND AREAS WHERE FURTHER STUDY IS CALLED FOR ARE IDENTIFIED.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW005142

PUBLICATION DATE: DEC 79

TITLE: STATUS ASSESSMENT OF TOXIC CHEMICALS: TRIS (2, 3-DIBROMOPROPYL) PHOSPHATE.

PERSONAL AUTHOR: BLACKWOOD, T. R.; AND OTHERS

DESCRIPTOR: AIR EMISSIONS; *ENVIRONMENTAL EFFECTS; HEALTH EFFECTS; POLLUTION; *STATUS ASSESSMENT; TOXIC SUBSTANCES; *TOXIC CHEMICALS; *TRIS (2, 3-DIBROMOPROPYL) PHOSPHATE; WATER POLLUTION CONTROL; *WATER POLLUTION

DESCRIPTIVE NOTE: 15P. PRICE: $6.00

ABSTRACT: THIS REPORT CONTAINS A STATUS ASSESSMENT OF THE AIR EMISSIONS, WATER POLLUTION, HEALTH EFFECTS, AND ENVIRONMENTAL SIGNIFICANCE OF TRIS (2, 3-DIBROMOPROPYL) PHOSPHATE. THIS STUDY WAS CONDUCTED TO PROVIDE A BETTER UNDERSTANDING OF THE DISTRIBUTION AND CHARACTERISTICS OF THIS POLLUTANT.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW005143
PUBLICATION DATE: DEC 79

TITLE: STATUS ASSESSMENT OF TOXIC CHEMICALS: VINYLIDENE CHLORIDE.

PERSONAL AUTHOR: BLACKWOOD, T. R.; AND OTHERS

DESCRIPTOR: *CHEMICALS; *POLLUTION CONTROL; *REGULATIONS; *TOXIC SUBSTANCES; *TOXIC CHEMICALS; TECHNOLOGY; *VINYLIDENE CHLORIDE; VINYLRESINS

DESCRIPTIVE NOTE: 24P. PRICE: $6.00

ABSTRACT: THIS REPORT DETAILS THE USES AND THE TECHNOLOGY EMPLOYED TO CONTROL EMISSIONS OF VINYLIDENE CHLORIDE. DATA ON VINYLIDENE CHLORIDE EMISSIONS AND THEIR SOURCES ARE GIVEN AS WELL AS INFORMATION DEALING WITH THE EFFECTS OF EXPOSURE TO VINYLIDENE CHLORIDE. FINALLY, REGULATORY ACTIONS AND AREAS REQUIRING FURTHER STUDY ARE OUTLINED.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW005144

PUBLICATION DATE: MAR 79

TITLE: CONCEPTUAL DESIGNS FOR WATER TREATMENT IN DEMONSTRATION PLANTS I. PLANT DESIGNS.

PERSONAL AUTHOR: SEUFERT, FREDERICK B.; AND OTHERS

DESCRIPTOR: *DESIGN; *COAL CONVERSION PLANTS; *DEMONSTRATION PLANTS; EVALUATION; *FACILITIES; *INDUSTRIES; *PILOT STUDIES; RESEARCH; TECHNOLOGY; *WASTEWATER; WASTEWATER TREATMENT; *WATER TREATMENT; WATER SUPPLY; WASTEWATER QUALITY

DESCRIPTIVE NOTE: 476P. PRICE: PRINTED COPY--$15.00, MICROFICHE--$3.00

ABSTRACT: THIS STUDY DEVELOPS CONCEPTUAL DESIGNS OF INTEGRATED WATER TREATMENT SYSTEMS FOR SIX COAL CONVERSION PLANTS, (FIVE DEMONSTRATION SIZE PLANTS AND ONE COMMERCIAL SIZE PLANT). THE REPORT DETAILS THE DESIGN DEVELOPMENT AND TREATMENT PLANT OPERATIONS SO AS TO GATHER INFORMATION FOR IMPROVED DESIGNS. COMMENTS ARE MADE WHERE THE DESIGNS HAVE BEEN BASED ON INSUFFICIENT OR QUESTIONABLE DATA AND SUGGESTIONS ARE INCLUDED FOR EXPERIMENTS NECESSARY TO IMPROVE THE DATA. DESIGNS HAVE BEEN PROVIDED FOR ALL THE PLANTS USING THE BEST KNOWN STANDARD TECHNOLOGY. THIS STUDY IS NOT LIMITED TO STANDARD PROCEDURES AND ADDITIONAL DESIGNS HAVE BEEN MADE USING NOVEL AND INNOVATIVE TECHNOLOGIES. SOME OF THESE ARE LABORATORY SIZE ONLY. WHERE THE RETURN HAS BEEN SHOWN TO BE GOOD, SPECIFIC RESEARCH SUGGESTIONS HAVE BEEN MADE.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW005145
PUBLICATION DATE: 79

TITLE: WATER REUSE AND RECYCLING, VOLUME 2: EVALUATION OF TREATMENT TECHNOLOGY.

PERSONAL AUTHOR: CULP/WESNER/CULP

DESCRIPTOR: *COST EFFECTIVENESS; *EFFLUENTS; *EFFLUENT QUALITY; *EVALUATION; *FACILITIES; *INDUSTRIAL WASTEWATER; *RESEARCH; *RECYCLING; *RECLAIMED WATER; SEWAGE; *TECHNOLOGY; *WASTEWATER TREATMENT; *WATER RESOURCES; *WATER SUPPLY; *WATER CONSERVATION; *WATER COSTS

DESCRIPTIVE NOTE: 670P. PRICE: $32.00

ABSTRACT: EXAMINED ARE THE BENEFICIAL USES, FOR RECLAIMED WASTEWATER AND THE TREATMENTS NECESSARY TO PRODUCE THE NEEDED EFFLUENT QUALITY. TREATMENT PROCESSES ARE EVALUATED BY: 1) EFFECTIVENESS OF CONTAMINANT REMOVAL, 2) RELIABILITY AND OPERABILITY, 3) COST EFFECTIVENESS, 4) ENERGY REQUIREMENTS, AND 5) SIDESTREAM AND BY-PRODUCT IMPACTS. THE COMMONLY ACCEPTED TYPES OF RECLAIMED WASTE WATER USE ARE CONTROLLED OR UNCONTROLLED, DIRECT OR INDIRECT, AND RECYCLED. IF REUSE IS PLANNED AND INTENTIONAL IT IS CONSIDERED CONTROLLED. INDIRECT REFERS TO THE LOSS OF IDENTITY OF A WASTE DISCHARGE AS IT FLOWS DOWNSTREAM. RECYCLED REFERS TO INTERNAL REUSE OF WATER PRIOR TO DISCHARGE. BENEFICIAL USES FOR WASTEWATER ARE IDENTIFIED AND REQUIREMENTS FOR EACH CATEGORY ARE ESTIMATED. ELEVEN BASIC LEVELS OF TREATMENT YIELD INCREASINGLY IMPROVED EFFLUENT QUALITIES ARE IDENTIFIED. EFFLUENT QUALITY FROM THE VARIOUS TREATMENT SYSTEMS STUDIED IS COMPARED TO EFFLUENT QUALITY REQUIREMENTS FOR BENEFICIAL USES. USING THIS COMPARISON, BENEFICIAL USES AND COMPATABLE TREATMENT LEVELS ARE IDENTIFIED. GRAPHS ARE PRESENTED EVALUATING THE ECONOMIC IMPACT OF INCREASED LEVELS OF WASTEWATER TREATMENT FOR REUSE VERSUS THE COST OF OBTAINING NEW WATER SUPPLIES.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW005146

PUBLICATION DATE: JUN 76

TITLE: NATIONWIDE ANALYSIS. APPENDIX K. WATER QUALITY CONCERNS PRESENT AND FUTURE.

DESCRIPTOR: BIOCHEMICAL OXYGEN DEMAND; NITROGEN; NONPOINT POLLUTION; PHOSPHORUS; POINT POLLUTION; *POLLUTION; *PLANNING; *POLICIES; SUSPENDED SOLIDS; *SURVEYS; TOXIC WASTES; WATER; *WATER ASSESSMENT; *WATER QUALITY; *WATER POLLUTION CONTROL

DESCRIPTIVE NOTE: 190P. PRICE: $12.00

ABSTRACT: A NATIONWIDE ANALYSIS WAS CONDUCTED BY THE COUNCIL'S MEMBER AGENCIES AND REFLECTS THEIR VIEWPOINTS ABOUT THE EXISTING AND FUTURE WATER AND RELATED LAND REQUIREMENTS, THE CHARACTER OF THE PROBLEMS AND CONFLICTS

ASSOCIATED WITH MEETING THESE REQUIREMENTS, AND THE ATTENDANT IMPLICATIONS FOR THE FUTURE. APPENDIX K. PROVIDES INFORMATION ON POINT AND NONPOINT DISCHARGES OF FOUR WASTEWATER VARIABLES: BIOCHEMICAL OXYGEN DEMAND, TOTAL SUSPENDED SOLIDS, NITROGEN, AND PHOSPHORUS. IT ALSO PRESENTS INFORMATION ON TOXIC WASTES AND RELATED PROBLEMS.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, OPERATIONS DIVISION, SPRINGFIELD, VA 22161

INSTITUTION NAME: UNITED STATES WATER RESOURCES COUNCIL.

IRIS ACCESSION NUMBER: EW005149

PUBLICATION DATE: AUG 79

TITLE: CHEMICAL INFORMATION RESOURCES DIRECTORY: DESCRIPTIVE AND SUBJECT CATALOGS.

PERSONAL AUTHOR: LEVITAN, K.; AND OTHERS

DESCRIPTOR: *CHEMISTRY; *CHEMICAL IDENTIFICATION; *CHEMICAL INFORMATION RESOURCES; *CHEMICAL SUBSTANCES INFORMATION NETWORK; *INFORMATION NETWORKS; INFORMATION SOURCES; *TOXIC SUBSTANCES; TOXIC SUBSTANCES CONTROL ACT (TSCA)

DESCRIPTIVE NOTE: 664P. PRICE: $31.00

ABSTRACT: THIS DIRECTORY CONTAINS CHARACTERIZATIONS AND INDEXING OF 53 RESOURCES FOR INFORMATION PERTAINING TO CHEMICALS AND TOXIC SUBSTANCES. INFORMATION ON HOW TO USE THE DIRECTORY AND AN INFORMATION RETRIEVAL GUIDE ARE INCLUDED. THE DIRECTORY PROVIDES INDIVIDUAL SECTIONS ON: THE CHARACTERISTICS OF THE 53 INFORMATION RESOURCES, THE CHARACTERISTICS OF THE DESCRIPTORS (DATA ELEMENTS) OF THE 53 RESOURCES, THE BASIC DIRECTORY HIERARCHICAL CLASSIFICATION SCHEME, AND THE CLASSIFICATION SCHEME MATCHED WITH THE NAMES OF THE INFORMATION RESOURCES.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, OPERATIONS DIVISION, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW005151

PUBLICATION DATE: 79

TITLE: MONITORING TOXIC SUBSTANCES.

PERSONAL AUTHOR: SCHUETZLE, DENNIS

DESCRIPTOR: *ANALYTICAL TECHNIQUES; AIR POLLUTION CONTROL; CARCINOGENS; *ENVIRONMENT; *LABORATORY PROCEDURES; *MONITORING; MUTAGENS; *POLLUTION; *SYMPOSIUM PROCEEDINGS; *TOXIC SUBSTANCES; TOXICOLOGY; WATER POLLUTION CONTROL

DESCRIPTIVE NOTE: 289P. PRICE: $30.00

ABSTRACT: THESE SYMPOSIUM PROCEEDINGS DEAL WITH THE DETECTION, MEASUREMENT AND MONITORING OF TOXIC SUBSTANCES IN THE ENVIRONMENT. METHODOLOGIES DISCUSSED INCLUDE BIOASSAYS, ATOMIC ABSORPTION SPECTROMETRY, ATOMIC EMISSION SPECTROSCOPY, MICROANALYTICAL TECHNIQUES, INFRARED ANALYSIS, OPTO-ACOUSTIC SPECTROSCOPY, SELECTIVE IONIZATION, COMPUTER TECHNIQUES AND ION CHROMATOGRAPHIC ANALYSIS.

AVAILABILITY: AMERICAN CHEMICAL SOCIETY, 1155 16TH STREET, N.W., WASHINGTON, DC 20036, ATTENTION: SPECIAL ISSUE SALES

IRIS ACCESSION NUMBER: EW005154

PUBLICATION DATE: JUL 80

TITLE: TAKE SIGHT ON LUBRICATION.

PERSONAL AUTHOR: KLAUSEGGER, R. B.

DESCRIPTOR: *EQUIPMENT; *LUBRICANT GAUGES; *LUBRICATION; *MAINTENANCE; SIGHT GLASSES

DESCRIPTIVE NOTE: 29P.

ABSTRACT: TO ELIMINATE GUESSWORK IN DETERMINING LUBRICANT LEVELS IN SPEED REDUCERS AND GEAR CASINGS, THIS ARTICLE RECOMMENDS INSTALLING SIGHT GLASSES IN PLACE OF PIPE PLUGS. THIS SAVES TIME AND DOESN'T REQUIRE SPECIAL TOOLS OR WRENCHES.

AVAILABILITY: POLLUTION ENGINEERING; V12 N7

IRIS ACCESSION NUMBER: EW005155

PUBLICATION DATE: JUL 80

TITLE: PUMP STATION CONTROL: HOW TO REDUCE MAINTENANCE COSTS.

PERSONAL AUTHOR: NEWMAN, DONALD E., SR.

DESCRIPTOR: *COST EFFECTIVENESS; *ELECTRODES; *EQUIPMENT; *FACILITIES; *MAINTENANCE; *PUMPS; PUMP STATIONS; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 32-33P.

ABSTRACT: CONCERNED WITH THE COST OF KEEPING PUMP STATIONS OPERATIONAL, THE NEED FOR A UNIVERSAL LIFT STATION CONTROL SYSTEM WAS IDENTIFIED. ELECTRODES WERE CHOSEN BECAUSE THEY REPRESENTED AN EASILY ADAPTABLE CONTROL SYSTEM USING PROVEN COMPONENTS WHICH WERE COST EFFECTIVE, RELIABLE, AND REQUIRED LOW MAINTENANCE.

AVAILABILITY: POLLUTION ENGINEERING; V12 N7

IRIS ACCESSION NUMBER: EW005156

PUBLICATION DATE: JUL 80

TITLE: PROTECTIVE SURFACING OF WEARING CLARIFIER

COMPONENTS.

PERSONAL AUTHOR: POTTER, JOHN L.; PEARSON, FRANK

DESCRIPTOR: *CLARIFIERS; *COST EFFECTIVENESS; *ENERGY CONSERVATION; *EQUIPMENT; *MAINTENANCE; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 34-35P.

ABSTRACT: AS A COST EFFECTIVE MEASURE A PILOT WASTEWATER TREATMENT PLANT HAS BELTED WEARING STRIPS, CUT FROM OLD TIRES, ON THE LEADING AND TRAILING EDGES OF ALL FLIGHTS. IN ADDITION, A TEFLON STRIP WAS FASTENEDTO THE WEAR PLATE USING COUNTER SUNK SCREWS. BECAUSE FRICTION ON THE WEARING SURFACE IS REDUCED, SLIGHT ENERGY SAVING BENEFITS ARE REALIZED IN ADDITION TO REDUCED MAINTENANCE COSTS.

AVAILABILITY: POLLUTION ENGINEERING; V12 N7

IRIS ACCESSION NUMBER: EW005157

PUBLICATION DATE: JUL 80

TITLE: SLUDGE HEAT TREATMENT LIQUORS.

PERSONAL AUTHOR: VANZILE, LARUE S.

DESCRIPTOR: *ACTIVATED SLUDGE; *EQUIPMENT; *FACILITIES; *HEAT TREATMENT; *OPERATIONS (WASTEWATER); *SLUDGE; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 35P.

ABSTRACT: IN A PENNSYLVANIA WASTEWATER TREATMENT PLANT ONE OF THREE RETURN SLUDGE STABILIZATION AERATION TANKS WAS TAKEN OUT OF THE RETURN SLUDGE PRETREATMENT TANK FOR HEAT TREATMENT LIQUORS. THE DETAILS OF THIS SET-UP ARE DISCUSSED IN THIS ARTICLE.

AVAILABILITY: POLLUTION ENGINEERING; V12 N7

IRIS ACCESSION NUMBER: EW005158

PUBLICATION DATE: JUL 80

TITLE: PEROXIDE STOPS ODOR AND CORROSION IN BEACHFRONT FORCE MAIN.

PERSONAL AUTHOR: NEWTON, LINWOOD C.

DESCRIPTOR: *CALIFORNIA; *CASE STUDIES; CORROSION; *EQUIPMENT; *FORCE MAINS; *HYDROGEN PEROXIDE; *MAINTENANCE; *ODORS; *OPERATIONS (WASTEWATER); *SULFIDES; *WASTEWATER COLLECTION

DESCRIPTIVE NOTE: 36-37P.

ABSTRACT: HYDROGEN SULFIDE ODOR AND CORROSION CAUSED BY LOW WASTEWATER FLOWS AND HIGH RETENTION TIMES IN THE FORCE MAIN RUNNING ALONG AN OCEANSIDE HIGHWAY WERE CAUSING SEVERE PROBLEMS IN CORONADO, CALIFORNIA. HOWEVER, BY FEEDING HYDROGEN PEROXIDE INTO THE MAIN FROM A STORAGE AND METERING SYSTEM THE CITY IS KEEPING SULFIDE PROBLEMS TO A MINIMUM. THIS ARTICLE EXAMINES THE VARIOUS ASPECTS OF THAT TREATMENT.

AVAILABILITY: POLLUTION ENGINEERING; V12 N7

IRIS ACCESSION NUMBER: EW005159

PUBLICATION DATE: JUN 80

TITLE: WATER FOR THE WORLD: THE SCOPE OF THE CHALLENGE.

PERSONAL AUTHOR: KALBERMATTEN, JOHN M.; MONTANARI, FRANCIS W.

DESCRIPTOR: AMERICAN WATER WORKS ASSOCIATION; *DEVELOPING NATIONS; ENGINEERING; *FACILITIES; *GLOBAL PROBLEMS; *MANAGEMENT; *OPERATIONS (WATER); *OPERATIONS (WASTEWATER); *PLANNING; *PERSONNEL; PUBLIC HEALTH; *SANITAION; *TRAINING; WATER RESOURCES; WATER SUPPLY; WASTE DISPOSAL

DESCRIPTIVE NOTE: 308-313P.

ABSTRACT: ASSISTANCE FROM PROFESSIONAL ORGANIZATIONS SUCH AS THE AMERICAN WATER WORKS ASSOCIATION IS ESSENTIAL IF THE GOALS OF THE INTERNATIONAL DRINKING WATER AND SANITATION DECADE ARE TO BE FULFILLED. THIS ASSISTANCE WILL HELP DESIGN AND CONSTRUCT ADEQUATE FACILITIES AND TRAIN PERSONNEL TO PROVIDE WATER SUPPLY AND SANITATION FACILITIES IN DEVELOPING NATIONS.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL, V72 N6

IRIS ACCESSION NUMBER: EW005160

PUBLICATION DATE: JUN 80

TITLE: ENERGY COSTS: A NEW FACTOR IN PIPE SIZE SELECTION.

PERSONAL AUTHOR: WALSKI, THOMAS M.

DESCRIPTOR: *COST EFFECTIVENESS; *CONSTRUCTION; DESIGN; ENGINEERING; *ENERGY; *OPERATIONS (WATER); *PIPE SIZE; *PIPES; *TRANSMISSION TIRES; *WATER SUPPLY

DESCRIPTIVE NOTE: 326-329P.

ABSTRACT: WITH THE PRICE OF ENERGY INCREASING AT A HIGHER RATE THAN OTHER COSTS, IT IS BECOMING ATTRACTIVE TO USE A LARGER PIPE SIZE FOR TRANSMISSION LINES TO SAVE ON ENERGY COSTS EVEN WITH HIGHER CONSTRUCTION COSTS. THE MAGNITUDE OF THE CHANGE IN THE PRICE OF ENERGY TO MAKE THIS PIPE SIZE SWITCH PRACTICAL IS PRESENTED WITH A DISCUSSION OF THE EFFECTS OF OTHER PARAMETERS INCLUDING LENGTH, FLOW, INTEREST RATE, CHANGE IN ELEVATION, AND PEAK-TO-AVERAGE FLOW RATIO.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL, V72

N6

IRIS ACCESSION NUMBER: EW005161

PUBLICATION DATE: JUN 80

TITLE: PRACTICAL POWER-SAVING TECHNIQUES IN PINELLAS COUNTY.

PERSONAL AUTHOR: EDMUNDS, ROBERT C.; AND OTHERS

DESCRIPTOR: COMPUTERS; *COST EFFECTIVENESS; *ENERGY; ENGINEERING; *MANAGEMENT; *OPERATIONS (WATER); *PUMP; *UTILITIES; *WATER SUPPLY

DESCRIPTIVE NOTE: 330-337P.

ABSTRACT: TECHNIQUES FOR OPTIMIZING THE OPERATION OF PUMPING FACILITIES SO AS TO MINIMIZE POWER COSTS WERE TESTED AT THE PINELLAS COUNTY WATER SYSTEM, A LARGE PUBLIC WATER UTILITY ON FLORIDAS WEST COAST. THE WORK INCLUDED DEVELOPMENT OF A LARGE COMPUTER PROGRAM THAT SIMULATES PUMPING STATION OPERATION AND SELECTS THE PUMP COMBINATION AND VARIABLE-SPEED DRIVE SETTING REQUIRING THE MINIMIUM POWER COST.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL, V72 N6

IRIS ACCESSION NUMBER: EW005162

PUBLICATION DATE: JUN 80

TITLE: PUMP SYSTEMS: WHAT PRICE INEFFICIENCY?

PERSONAL AUTHOR: DAFFER, ROBERT A., JR.; PRICE, JOHN M.

DESCRIPTOR: *COSTS; DESIGN; ENGINEERING; ELECTRIC MOTORS; *ENERGY; *EFFICENCY; MANAGEMENT; *PUMPS; *UTILITIES

DESCRIPTIVE NOTE: 338-343P.

ABSTRACT: WITH THE ENERGY CRUNCH UPON UTILITIES, IT IS MORE IMPORTANT THAN EVER TO HAVE THE MOST EFFICIENT PUMP SYSTEM POSSIBLE. ONE ENERGY-SAVING APPROACH IS TO BASE PUMP SYSTEM DESIGN ON "TOTAL SYSTEM ANALYSIS" FROM THE SELECTION OF THE PROPER PUMPS (BASED ON SYSTEM HEAD CURVES) TO THE SELECTION OF THE PROPER DRIVERS. IN ADDITION TO SAVING ENERGY, SOUND DESIGNS ALSO HELP CONSERVE FINANCIAL RESOURCES IN INFLATIONARY TIMES.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL, V72 N6

IRIS ACCESSION NUMBER: EW005163
PUBLICATION DATE: APR 80

TITLE: HEALTH ASPECTS OF URBAN WATER CONSERVATION.

PERSONAL AUTHOR: BISHOP, CREG S.; SIKORA, VINCENT A.

DESCRIPTOR: *CONSERVATION (ENVIRONMENT); ENVIRONMENTAL INFLUENCES; FEDERAL GOVERNMENT; *FEDERAL PROGRAMS; GOVERNMENT ROLE; *PUBLIC HEALTH; *URBAN ENVIRONMENT; *WATER RESOURCES

DESCRIPTIVE NOTE: 250-252P.

ABSTRACT: DISCUSSED ARE THE NATURE, POTENTIAL SCOPE, AND LIMITATIONS OF THE FEDERAL URBAN WATER CONSERVATION PROGRAM IN RELATIONSHIP TO ENVIRONMENTAL HEALTH METHODS TO CONSERVE WATER, INCLUDING PRESSURE REDUCTION, WATER SAVING DEVICES, LEAK REDUCTION, RECYCLING, AND PRICE INCREASES ARE DETAILED.

AVAILABILITY: JOURNAL OF ENVIRONMENTAL HEALTH; V42 N5

IRIS ACCESSION NUMBER: EW005164

PUBLICATION DATE: APR 80

TITLE: HEALTH: AN INTANGIBLE BENEFIT OF WATER POLLUTION CONTROL PROGRAMS.

PERSONAL AUTHOR: MOORE, L. LAMONT

DESCRIPTOR: *AGENCIES; *COST EFFECTIVENESS; ECONOMIC FACTORS; EVALUATION METHODS; *FEDERAL GOVERNMENT; FEDERAL PROGRAMS; *GOVERNMENT ROLE; POLICY FORMATION; *PUBLIC HEALTH; *WATER POLLUTION CONTROL

DESCRIPTIVE NOTE: 254-257P.

ABSTRACT: DISCUSSED IS COST-BENEFIT ANALYSIS IN THE CONTEXT OF PROBLEMS ENVIRONMENTAL REGULATORY AGENCIES CONFRONT IN PLACING A DOLLAR VALUE ON WATER POLLUTION CONTROL MEASURES. BENEFITS RELATED TO IMPROVED HEALTH ARE STRESSED.

AVAILABILITY: JOURNAL OF ENVIRONMENTAL HEALTH; V42 N5

IRIS ACCESSION NUMBER: EW005165

PUBLICATION DATE: JUN 80

TITLE: AN OVERVIEW OF SLUDGE DISPOSAL.

PERSONAL AUTHOR: SERPER, ALLEN

DESCRIPTOR: ENVIRONMENTAL HEALTH; ENERGY CONSERVATION; *INCINERATION; *OPERATIONS (WASTEWATER); OXIDATION; POLLUTION; *REGULATIONS; *SLUDGE; *SLUDGE DISPOSAL; *SLUDGE CHARACTERISTICS; *WASTE DISPOSAL; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 20-23P.

ABSTRACT: SLUDGE MANAGEMENT HAS BECOME A CENTER OF ATTENTION IN THE WASTEWATER TREATMENT INDUSTRY. NEW ENVIRONMENTAL REGULATIONS HAVE MANDATED THAT MUNICIPALITIES REVIEW AND REVISE THEIR CURRENT METHODS OF SLUDGE DISPOSAL. THE ARTICLE DISCUSSES WET AIR OXIDATION AND MULTIPLE-HEARTH AND FLUIDIZED-BED INCINERATION.

AVAILABILITY: WATER AND SEWAGE WORKS; 1980 REFERENCE NUMBER, SCRANTON PUBLISHING COMPANY, INC., 434 SOUTH WABASH AVE., CHICAGO, IL 60605

IRIS ACCESSION NUMBER: EW005166

PUBLICATION DATE: JUN 80

TITLE: WASTEWATER TREATMENT IN THE UNITED STATES.

PERSONAL AUTHOR: ARORA, MADAN L.; AND OTHERS

DESCRIPTOR: BIOCHEMICAL OXYGEN DEMAND; BIODEGREDATION; CHEMICAL OXYGEN DEMAND; EFFLUENTS; INORGANIC POLLUTANTS; MUNICIPALITIES; ORGANIC POLLUTION; POLLUTION CONTROL EQUIPMENT; REGULATIONS; *UNITED STATES; UTILITIES; *WASTEWATER TREATMENT; *WATER POLLUTION CONTROL; WASTEWATER

DESCRIPTIVE NOTE: 24-34P.

ABSTRACT: DESCRIBED IS THE PRESENT STATUS OF WASTEWATER TREATMENT IN THE UNITED STATES. TOPICS COVERED INCLUDE DISCUSSION OF PRELIMINARY, PRIMARY, SECONDARY, AND TERTIARY TREATMENTS; SOLIDS TREATMENT AND HANDLING; AND ULTIMATE DISPOSAL PROCEDURES.

AVAILABILITY: WATER AND SEWAGE WORKS; 1980 REFERENCE NUMBER, SCRANTON PUBLISHING COMPANY, INC., 434 SOUTH WABASH AVE., CHICAGO, IL 60605

IRIS ACCESSION NUMBER: EW005167

PUBLICATION DATE: JUN 80

TITLE: OPERATING VARIABLES INFLUENCE COST OF GAC TREATMENT.

PERSONAL AUTHOR: CLARK, ROBERT M.; DORSEY, PAUL

DESCRIPTOR: *ACTIVATED CARBON; COST EFFECTIVENESS; DESIGN; ENERGY; FILTRATION; *GRANULAR ACTIVATED CARBON; REACTIVATION; *WASTEWATER; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 36-40P.

ABSTRACT: TREATING WASTEWATER WITH GRANULAR ACTIVATED CARBON (G.A.C.) INVOLVES TWO MAJOR, SEPARATE PROCESSES: FILTRATION OF THE WATER AND REACTIVATION OF THE CARBON. AN ECONOMIC ANALYSIS FOR THIS TREATMENT PROCEDURE WAS PERFORMED FOR VARIOUS PLANT CAPACITIES TO EVALUATE WHICH OPERATING VARIABLES INFLUENCE THE COST OF THE TREATMENT. DESIGN IMPLICATIONS, INFLATION AND ENERGY COSTS WERE ALSO BUILT INTO THE ANALYSIS. THE ECONOMIC ANALYSIS EMPHASIZES THAT ALTHOUGH G.A.C. SYSTEMS ARE RELATIVELY COMPLEX THEY CAN BE DESIGNED TO OPERATE EFFICIENTLY AND COST-EFFECTIVELY. THE KEY IS CAREFUL STUDY AND COMMON SENSE, WHICH LEAD TO AN INTELLIGENT UNDERSTANDING OF THE SYSTEM DESIGN AND OPERATION.

AVAILABILITY: WATER AND SEWAGE WORKS; 1980 REFERENCE NUMBER, SCRANTON PUBLISHING COMPANY, INC., 434 SOUTH WABASH AVE., CHICAGO, IL 60605

IRIS ACCESSION NUMBER: EW005168

PUBLICATION DATE: JUN 80

TITLE: COST OF COMPUTING GRANULAR CARBON ABSORPTION TREATMENT.

PERSONAL AUTHOR: GUMERMAN, ROBERT C.; AND OTHERS

DESCRIPTOR: *COSTS; CARBON ABSORPTION; COST CURVES; *ECONOMIC ANALYSIS; *GRANULAR CARBON ABSORPTION; MAINTENANCE; *OPERATIONS (WATER); POTABLE WATER; PRESSURE CARBON CONTACTORS; *WATER TREATMENT

DESCRIPTIVE NOTE: 42-46P.

ABSTRACT: THE COST OF TREATMENT OF POTABLE WATER BY GRANULAR ACTIVATED CARBON HAS BEEN DEBATED FOR SEVERAL YEARS, POSSIBLY BECAUSE OF THE MANY VARIANTS INVOLVED. THE AUTHORS OF THIS PAPER HAVE DEVELOPED 99 COST CURVES CONTENDING WITH DIFFERENT SITUATIONS; 12 OF THEM ARE REPORTED HERE. THESE CURVES CAN BE USED TO PROVIDE MORE THAN CAPITAL, OPERATION, AND MAINTENANCE COSTS. THEY CAN PROVIDE INSIGHT INTO THE INFLUENCE OF CHANGES IN DESIGN CONFIGURATIONS UPON COSTS, AND ALLOW FOR COMPARISONS BETWEEN PROCESSES BY SENSITIVITY ANALYSIS.

AVAILABILITY: WATER AND SEWAGE WORKS; 1980 REFERENCE NUMBER, SCRANTON PUBLISHING COMPANY, INC., 434 SOUTH WABASH AVE., CHICAGO, IL 60605

IRIS ACCESSION NUMBER: EW005169

PUBLICATION DATE: JUN 80

TITLE: ''RETROFITTING'' FOR ENERGY SAVINGS.

PERSONAL AUTHOR: WESNER, GEORGE M.; AND OTHERS

DESCRIPTOR: *ENERGY; *ENERGY CONSERVATION; MAINTENANCE; *OPERATIONS (WASTEWATER); *RETROFITTING; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 48-50P.

ABSTRACT: PROVIDED IS A DISCUSSION OF THE EFFECT OF RETROFITTING ON ENERGY CONSERVATION IN WASTEWATER TREATMENT FACILITIES. SPECIFICALLY, PUMPING ADJUSTMENTS, ALTERATION OF PUMP MAINTENANCE AND OPERATIONAL PROCEDURES, AERATION-SYSTEM ADJUSTMENTS, AND MANIPULATION OF SOLIDS RETENTION TIME ARE STRESSED.

AVAILABILITY: WATER AND SEWAGE WORKS; 1980 REFERENCE NUMBER, SCRANTON PUBLISHING COMPANY, INC., 434 SOUTH WABASH AVE., CHICAGO, IL 60605

IRIS ACCESSION NUMBER: EW005170

PUBLICATION DATE: JUN 80

TITLE: CHEMICALLY TREATING WASTEWATER: AN UPDATE.

PERSONAL AUTHOR: OCKERSHAUSEN, R. W.

DESCRIPTOR: *CHEMISTRY; *CHEMICAL REACTIONS; *CHEMICAL TREATMENT; EFFLUENTS; LIME; *METALS; OPERATIONS (WASTEWATER); PHOSPHORUS; *WASTEWATER; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: P51-52, 110P.

ABSTRACT: GROWTH IN THE WASTEWATER INDUSTRY OVER THE PAST DECADE HAS RESULTED IN A BETTER UNDERSTANDING OF THE CAPABILITIES OF CHEMICAL TREATMENT, THE LOW-COST INSTALLATION OF STORAGE-AND-FEEDING EQUIPMENT, AND THE OPPORTUNITY TO UPGRADE WASTE QUALITY. THE UTILIZATION OF METAL SALTS IN THE TREATMENT PROCESS HAS REDUCED PHOSPHORUS TO LOW VALUES AND IMPROVED REDUCTIONS IN SUSPENDED SOLIDS AND BIOCHEMICAL OXYGEN DEMAND. IN MANY INSTANCES, METALS HAVE ALSO BEEN REDUCED TO LOW CONCENTRATIONS IN THE PLANT EFFLUENT. THESE FACTORS HAVE ESTABLISHED THE ROLE OF CHEMICAL TREATMENT ON A FIRM AND PERMANENT BASIS IN THE WASTEWATER TREATMENT FIELD.

AVAILABILITY: WATER AND SEWAGE WORKS; 1980 REFERENCE NUMBER, SCRANTON PUBLISHING COMPANY, INC., 434 SOUTH WABASH AVE., CHICAGO, IL 60605

IRIS ACCESSION NUMBER: EW005171

PUBLICATION DATE: JUN 80

TITLE: DECHLORINATION CONTROL.

PERSONAL AUTHOR: WITKOWSKI, WILLIAM JOHN; AND OTHERS

DESCRIPTOR: *DECHLORINATION; CHLORINATION; *DISINFECTION; EFFLUENT QUALITIY; OPERATIONS (WASTEWATER); QUALITY CONTROL; STANDARDS; SULFUR DIOXIDE; TOXIC SUBSTANCES; *WASTEWATER; *WASTEWATER TREATMENT; WATER POLLUTION

DESCRIPTIVE NOTE: 53-34P.

ABSTRACT: CURRENTLY, CHLORINE IS USED AS A DISINFECTION TREATMENT, AND IS DISCHARGED WITH THE RESULTANT PURIFIED EFFLUENT. THE TOXIC EFFECTS OF CHLORINE AND SOME OF ITS COMPOUNDS UPON THE AQUATIC ENVIRONMENT ARE CAUSING CONCERN AMONG A BROAD SPECTRUM OF PEOPLE CONCERNED WITH THE WATER FIELD. THEREFORE, SOME SYSTEM OF DECHLORINATION SHOULD BE CONSIDERED FOR CHLORINE DISINFECTION SYSTEMS. THIS ARTICLE DESCRIBES APPROPRIATE PROCEDURES FOR USING SULFUR DIOXIDE FOR DECHLORINATION.

AVAILABILITY: WATER AND SEWAGE WORKS; 1980 REFERENCE NUMBER, SCRANTON PUBLISHING COMPANY, INC., 434 SOUTH WABASH AVE., CHICAGO, IL 60605

IRIS ACCESSION NUMBER: EW005172

PUBLICATION DATE: JUN 80

TITLE: UV DISINFECTION CHAMBERS REQUIRE CUSTOM DESIGNING.

DESCRIPTOR: *DISINFECTION; *DESIGN; OPERATIONS (WASTEWATER); *ULTRAVIOLET RADIATION; *WASTEWATER; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 56-61P.

ABSTRACT: ULTRAVIOLET LIGHT CAN BE UTILIZED AS A DISINFECTANT. HOWEVER, THE DESIGN OF THE ULTRAVIOLET CHAMBER MUST BE CAREFULLY ANALYZED TO ENSURE EFFECTIVE DISINFECTION. THE AUTHOR DISCUSSES LIGHT SOURCES, ULTRAVIOLET LIGHT TRANSMISSION, AND DISINFECTION ANALYSIS FOR BACTERIA, AND COMPARES DISINFECTION ALTERNATIVES.

AVAILABILITY: WATER AND SEWAGE WORKS; 1980 REFERENCE NUMBER, SCRANTON PUBLISHING COMPANY, INC., 434 SOUTH WABASH AVE., CHICAGO, IL 60605

IRIS ACCESSION NUMBER: EW005173

PUBLICATION DATE: JUN 80

TITLE: DESIGNING CHLORINE SOLUTION DISTRIBUTION SYSTEMS.

PERSONAL AUTHOR: NAGEL, WILLIAM S.

DESCRIPTOR: *CHLORINE; *DESIGN; *DISINFECTION; *EQUIPMENT; *OPERATIONS (WASTEWATER); *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 64-66P.

ABSTRACT: OUTLINES THE DESIGN CONSIDERATIONS FOR A CHLORINE SOLUTION DISTRIBUTION SYSTEM. THE DESIGN MUST ESTABLISH THE PROPER SIZING OF THE SOLUTION PANEL AND FLOWMETERS; RANGE OF METERS; SIZING OF THE MAIN AND BRANCH SOLUTION LINES; SIZING OF THE DIFFUSERS AND OF THE CHLORINATOR EJECTOR NOZZLE AND THROAT; AND THE SIZING OF THE EJECTOR WATER-SUPPLY LINE AND BOOSTER PUMP.

AVAILABILITY: WATER AND SEWAGE WORKS; 1980 REFERENCE NUMBER, SCRANTON PUBLISHING COMPANY, INC., 434 SOUTH WABASH AVE., CHICAGO, IL 60605

IRIS ACCESSION NUMBER: EW005174

PUBLICATION DATE: JUN 80

TITLE: PREDICTING CL2 WITHDRAWAL.

PERSONAL AUTHOR: RATIGAN, BRIAN

DESCRIPTOR: *CHLORINE; *CHLORINE WITHDRAWAL; *EQUIPMENT; OPERATIONS (WASTEWATER); *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 67-68P.

ABSTRACT: BECAUSE OF THE SCARCITY OF DATA ON CHLORINE WITHDRAWAL, A METHOD HAS BEEN DEVELOPED FOR PREDICTING WITHDRAWAL RATES FROM A 150 LB CYLINDER. THIS PREDICTION IS BASEN ON A KNOWLEDGE OF THE INITIAL MASS AND TEMPERATURE OF CHLORINE AS WELL AS THE TEMPERATURE OF THE SURROUNDINGS. A COMPUTER MODEL WAS DEVELOPED TO INCREASE THE PREDICTION RANGE AND UTILITY OF THE METHOD.

AVAILABILITY: WATER AND SEWAGE WORKS; 1980 REFERENCE NUMBER, SCRANTON PUBLISHING COMPANY, INC., 434 SOUTH WABASH AVE., CHICAGO, IL 60605

IRIS ACCESSION NUMBER: EW005175

PUBLICATION DATE: JUN 80

TITLE: NOMOGRAPH: SOLUTIONS FOR PIPE AND CHANNEL FLOWS.

DESCRIPTOR: *CHANNEL FLOWS; *CALCULATIONS; *FLUID FLOW; *HYDRAULICS; MEASUREMENT; *PIPE FLOW; *PIPES; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 69-84P.

ABSTRACT: THIS MONOGRAPH CONTAINS SEVEN SHORT PAPERS ON SOLUTIONS FOR PIPE AND CHANNEL FLOWS. THE TOPICS COVERED INCLUDE: CALCULATING CHANNEL DISCHARGE, MEASURING WATER LINE FLOW RATE, DESIGNING CHANNELS FOR FLUID FLOW-RATE REQUIREMENTS, MEASUREMENT OF PIPE FLOW, HAZEN-WILLIAMS PIPE FLOW UTILIZATION, MANNING FORMULA PIPE FLOW CHART UTILIZATION, AND EFFICIENT DESIGN DIMENSIONS FOR TRAPEZOIDAL FLOW CHANNELS.

AVAILABILITY: WATER AND SEWAGE WORKS; 1980 REFERENCE NUMBER, SCRANTON PUBLISHING COMPANY, INC., 434 SOUTH WABASH AVE., CHICAGO, IL 60605

IRIS ACCESSION NUMBER: EW005176

PUBLICATION DATE: JUN 80

TITLE: TYPICAL PIPE FLOW PROBLEMS PROGRAMMED FOR LIMITED CAPABILITY CALCULATORS.

PERSONAL AUTHOR: MARINOS, ARISTIDES

DESCRIPTOR: *CALCULATOR PROGRAMS; *CALCULATION; *FLUID FLOW; FRICTION; *HYDRAULICS; HAND CALCULATORS; MATHEMATICS; *PIPE FLOW; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: P86-87P.

ABSTRACT: THE BASIC PROBLEM OF TURBULENT FLOW IN PIPES CAN BE SOLVED WITH HAND CALCULATORS HAVING EVEN LIMITED CAPABILITY. THIS PAPER LISTS FOUR BASIC PROGRAMS WHICH ARE AVAILABLE FOR CALCULATING THE UNKNOWN VARIABLE IN THE DARCY-WEISBACH FORMULA.

AVAILABILITY: WATER AND SEWAGE WORKS; 1980 REFERENCE NUMBER, SCRANTON PUBLISHING COMPANY, INC., 434 SOUTH WABASH AVE., CHICAGO, IL 60605

IRIS ACCESSION NUMBER: EW005177

PUBLICATION DATE: JUN 80

TITLE: A SOLUTION TO PIPE-SIZE ANALYSIS.

PERSONAL AUTHOR: SHAEVITZ, HOWARD

DESCRIPTOR: CONDUITS; *CARRYING CAPACITY; *DESIGN; *CALCULATIONS; *FLUID FLOW; *HYDRAULICS; *MATHEMATICAL EQUATIONS; *PIPE SIZE; PIPES

DESCRIPTIVE NOTE: P90P.

ABSTRACT: THE GAUCKLE-MANNING EQUATION IS THE MOST WIDELY USED EQUATION IN DETERMINING THE INTERRELATIONSHIP OF THE CARRYING CAPACITY, VELOCITY, SLOPE, AND RESISTANCE IN A CONDUIT. THE MOST SUITABLE PRESENTATION OF THIS EQUATION LIES NOT IN ONE EQUATION, CHART, MONOGRAPH, OR SERIES OF NOMOGRAPHS, BUT IN A SIMPLE DERIVATION OF THE EQUATION TO REDUCE THE TIME FOR AN ANSWER. THE RESULT, WHICH IS DISCUSSED IN THIS ARTICLE, IS A SET OF THREE COMPONENTS CONSISTING OF TWO TABLES AND A CHART OF THE HYDRAULIC ELEMENTS OF CIRCULAR PIPES, WHICH CAN BE READILY MANIPULATED FOR ANSWERS.

AVAILABILITY: WATER AND SEWAGE WORKS; 1980 REFERENCE NUMBER, SCRANTON PUBLISHING COMPANY, INC., 434 SOUTH WABASH AVE., CHICAGO, IL 60605

IRIS ACCESSION NUMBER: EW005178

PUBLICATION DATE: JUN 80

TITLE: A GUIDE TO PROTECTIVE COATINGS IN WATER/WASTEWATER TREATMENT FACILITIES.

PERSONAL AUTHOR: VIVONA, MORRIS A.; DELANY, THOMAS P.

DESCRIPTOR: *CORROSION; *CORROSION CONTROL; *EQUIPMENT PROTECTION; FACILITIES; *MAINTENANCE; *PAINTS; WASTEWATER TREATMENT

DESCRIPTIVE NOTE: P92-98P.

ABSTRACT: THIS ARTICLE PROVIDES GUIDELINES FOR PROTECTING WASTEWATER TREATMENT PLANTS AND STORAGE FACILITIES. TOPICS COVERED INCLUDE: SPECIFIC INSPECTIONS, SURFACE PREPARATION, AND PAINT SYSTEMS. PAINT SYSTEMS DISCUSSED ARE PRIMERS, ALKYDES, PHENOLICS, CHLORATED RUBBERS, EMULSION VINYLS AND EPOXIES.

AVAILABILITY: WATER AND SEWAGE WORKS; 1980 REFERENCE NUMBER, SCRANTON PUBLISHING COMPANY, INC., 434 SOUTH WABASH AVE., CHICAGO, IL 60605

IRIS ACCESSION NUMBER: EW005179

PUBLICATION DATE: JUN 80

TITLE: PLUNGER PUMPS HANDLE SLUDGE.

DESCRIPTOR: *EQUIPMENT; *INDUSTRIAL WASTES; *MAINTENANCE; *PLUNGER PUMPS; *SLUDGE; *SLUDGE HANDLING; UTILITIES; *WASTE DISPOSAL; WASTEWATER TREATMENT

DESCRIPTIVE NOTE: P100-103P.

ABSTRACT: ARTICLE DISCUSSES THE MERITS OF PLUNGER PUMPS IN HANDLING SLUDGE. A COMPLETE DESCRIPTION OF THE PUMP IS PROVIDED, ALONG WITH TIPS TO IMPROVE OPERATING AND MAINTENANCE PRACTICES. THE PUMP IS APPROPRIATE FOR MANY APPLICATIONS INVOLVING THE TRANSFER AND PROCESSING OF SLUDGE, BOTH IN MUNICIPAL-SEWAGE-TREATMENT PLANTS AND IN INDUSTRIAL-WASTE-TREATMENT PLANTS.

AVAILABILITY: WATER AND SEWAGE WORKS; 1980 REFERENCE NUMBER, SCRANTON PUBLISHING COMPANY, INC., 434 SOUTH WABASH AVE., CHICAGO, IL 60605

IRIS ACCESSION NUMBER: EW005180

PUBLICATION DATE: JUL 80

TITLE: TRICKLING FILTER SYSTEM IMPROVED.

DESCRIPTOR: *COST EFFECTIVENESS; ENERGY CONSERVATION; EQUIPMENT; *FACILITIES; OPERATIONS (WASTEWATER); *TRICKLING FILTER SYSTEM; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 9P.

ABSTRACT: PRACTICAL RESEARCH AT AN OPERATING WASTEWATER TREATMENT PLANT HAS SHOWN THAT MODIFICATIONS OF THE TRICKLING FILTER SYSTEM CAN RESULT IN REDUCED POWER, LABOR, AND FACILITY REQUIREMENTS WITHOUT SACRIFICING HIGH WASTEWATER QUALITY. THE NEW PROCESS USES A SOLIDS CONTACT, UPFLOW UNIT, DEEPER THAN STANDARD UNITS, AND AN ENLARGED CENTER WELL.

AVAILABILITY: WATER AND WASTES ENGINEERING; V17 N7

IRIS ACCESSION NUMBER: EW005181

PUBLICATION DATE: JUL 80

TITLE: WHY IS ROTUNDA STILL AN RO SUCCESS?

PERSONAL AUTHOR: SUMRALL, HUGH; SCHOMAKER, BILL

DESCRIPTOR: *CASE HISTORIES; ENGINEERING DESIGN; EQUIPMENT; *FACILITIES; FLORIDA; *MAINTENANCE; *MANAGEMENT; *OPERATIONS (WATER); OPERATORS; *REVERSE OSMOSIS; *WATER TREATMENT

DESCRIPTIVE NOTE: 24-26, 28P.

ABSTRACT: THIS ARTICLE EXAMINES THE SUCCESSFUL OPERATION OF THE ROTUNDA WEST REVERSE OSMOSIS WATER TREATMENT PLANT. THIS CASE HISTORY OF ROTUNDA WEST CLEARLY INDICATES THE LONGEVITY OF THE ORIGINAL PARAMEATORS RESULTING FROM PROPER AND CONSERVATIVE ENGINEERING DESIGN, AND FROM REVIEW AND TECHNICAL ASSISTANCE BY QUALIFIED PERSONNEL. GOOD OPERATING PROCEDURES, WELL-TRAINED OPERATORS, AND A DEFINED MAINTENANCE SCHEDULE ALSO CONTRIBUTE TO THE SUCCESS OF ROTUNDA WEST. DETAILED FIGURES, TABLES, AND PHOTOGRAPHS ACCOMPANY THE ARTICLE.

AVAILABILITY: WATER AND WASTES ENGINEERING; V17 N7

IRIS ACCESSION NUMBER: EW005182

PUBLICATION DATE: JUL 80

TITLE: IMPROVE I-I/SSES ACCURACY AND CUT COSTS.

PERSONAL AUTHOR: THARP, EDWARD L.; LAWSON, LANCE P.

DESCRIPTOR: *COST BENEFIT ANALYSIS; COST EFFECTIVENESS; *FLOW MONITORING; *INFILTRATION; *INFLOW; MANAGEMENT; *MONITORING; *PIPES; *SEWERS; *WASTEWATER COLLECTION

DESCRIPTIVE NOTE: 29-30, 54P.

ABSTRACT: BY SYSTEMATICALLY NARROWING THE SEARCH AREA, TWO-STAGE FLOW MONITORING CAN REDUCE THE SCOPE OF PHYSICAL INVESTIGATION AND OTHER COSTLY METHODS OF LOCATING INFILTRATION-INFLOW SOURCES. TESTS UTILIZING TWO-STAFE MONITORING HAVE CONCLUDED THAT 80% OF ALL I/I PROBLEMS OCCUR IN ONLY 20% OF THE SEWER SYSTEM. A SUBSTANTIAL REDUCTION OF UP TO 50% OF THE TOTAL COST OF THE I/I-SSES (SEWER SYSTEM EVALUATION SURVEY) CAN THEN BE ACHIEVED.

AVAILABILITY: WATER AND WASTES ENGINEERING; V17 N7

IRIS ACCESSION NUMBER: EW005183

PUBLICATION DATE: JUL 80

TITLE: KEEP DIGESTERS CLEAN.

PERSONAL AUTHOR: NICOLAI, BRUNO

DESCRIPTOR: *CASE STUDIES; CONNECTICUT; CLEANING; *DEWATERING; *DIGESTORS; *FACILITIES; *MAINTENANCE; *OPERATIONS (WASTEWATER); *WASTEWATER TREATMENT; WASTE DISPOSAL

DESCRIPTIVE NOTE: 37-39P.

ABSTRACT: EXAMINED IS THE PRIMARY AND SECONDARY DIGESTOR

CLEANING OF THE MERIDEN (CONN.) SEWER TREATMENT PLANT. PLANT OPERATORS THERE SUGGEST THAT DIGESTORS SHOULD BE DEWATERED EVERY TWO OR THREE YEARS IN ORDER TO: INSPECT THE INTERIOR, ASSESS THE AMOUNT OF GRIT BEING PUMPED INTO THE STRUCTURES, AND REMOVE FLOATING SCUM, FLOATING SOLIDS AND GRIT.

AVAILABILITY: WATER AND WASTE ENGINEERING; V17 N7

IRIS ACCESSION NUMBER: EW005184

PUBLICATION DATE: JUL 80

TITLE: SMALL CITY REQUIRES LARGE WWTP.

PERSONAL AUTHOR: RIDDLE, W. G.

DESCRIPTOR: *CASE STUDIES; *DESIGN; *FACILITIES; INDUSTRIAL WASTES; OPERATIONS (WASTEWATER); *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 42-44P.

ABSTRACT: THE CITY OF MONETT, MO. (POP. 6,000) NEEDED A NEW WASTEWATER TREATMENT PLANT TO SERVE A POPULATION EQUIVALENT OF 40,000 DUE TO THE PRESENCE OF SEVERAL WET INDUSTRIES. THIS ARTICLE EXAMINES THE PLANNING, PLANT DESIGN, AND EVALUATION OF THAT TREATMENT PLANT. A HYDRAULIC PROFILE, PROCESS SCHEMATIC, PLANT LAYOUT, AND PLANT OPERATING DATA ARE ILLUSTRATED.

AVAILABILITY: WATER AND WASTE ENGINEERING; V17 N7

IRIS ACCESSION NUMBER: EW005185

PUBLICATION DATE: JUL 80

TITLE: IMPROVE RO PRETREATMENT.

PERSONAL AUTHOR: COMSTOCK, DANIEL

DESCRIPTOR: COAGULATION; COLLOIDAL FOULING; *EQUIPMENT EVALUATION; *FILTERS; FILTRATION; *GRANULAR MEDIA FILTER; *LABORATORY TESTING; POLYMERS; *REVERSE OSMOSIS; TURBIDITY; *WATER TREATMENT

DESCRIPTIVE NOTE: 47-51P.

ABSTRACT: THIS ARTICLE SUMMARIZES A PORTION OF THE SEAWATER WORK CONDUCTED AT THE OREGON STATE UNIVERSITY MARINE SCIENCE CENTER. TESTS THERE SHOWED THAT THE RIGHT COMBINATION OF GRANULAR MEDIA FILTER AND COAGULANT CAN PREVENT COLLOIDAL FOULING IN REVERSE OSMOSIS SYSTEMS. STUDIES ALSO SHOWED THAT, OVERALL, THERE WAS LITTLE CORRELATION SEEN BETWEEN PLUGGING FACTOR AND TURBIDITY WHICH STRENGTHENS THE ARGUEMENT THAT TURBIDITY IS NOT A GOOD CRITERION OF FEEDWATER QUALITY.

AVAILABILITY: WATER AND WASTE ENGINEERING; V17 N7

IRIS ACCESSION NUMBER: EW005192

PUBLICATION DATE: AUG 80

TITLE: DENVER'S POTABLE REUSE PROJECT: PATHWAY TO PUBLIC ACCEPTANCE.

PERSONAL AUTHOR: WORK, STEPHEN; AND OTHERS

DESCRIPTOR: COLORADO; *DEMONSTRATION PROJECTS; DENVER WATER DEPARTMENT; *DRINKING WATER; *POTABLE WATER; PUBLIC HEALTH; PUBLIC RELATIONS; *WATER TREATMENT; *WATER QUALITY; *WATER SUPPLY; WATER RESOURCES

DESCRIPTIVE NOTE: 435-440P.

ABSTRACT: THIS ARTICLE REPORTS ON THE DENVER WATER DEPARTMENT'S PORTABLE REUSE DEMONSTRATION PROJECT, A $22 MILLION EFFORT UNDERTAKEN COOPERATIVELY WITH THE ENVIRONMENTAL PROTECTION AGENCY. CONCERN OVER SAFETY AND QUALITY HAS BEEN THE STARTING POINT FOR DENVER'S PROJECT. THE INTENSIVE PROGRAM NECESSARY TO ADEQUATELY ADDRESS THE SAFETY QUESTION INVOLVES A VARIETY OF DISCIPLINES-- ORGANIC AND INORGANIC CHEMISTRY, MICROBIOLOGY, VIROLOGY, HEALTH EFFECTS RESEARCH, AND PUBLIC RELATIONS. ALL OF THESE ACTIVITIES HAVE BEEN DESIGNED INTO DENVER'S PROGRAM SO THAT WHEN TECHNICAL AND ECONOMIC FEASIBILITY HAVE BEEN DEMONSTRATED, HEALTH PROFESSIONALS AND THE GENERAL PUBLIC WILL BE ABLE TO MAKE INTELLIGENT DECISIONS ON THE ACCEPTABILITY OF PORTABLE REUSE IN DENVER.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL; V72 N8

IRIS ACCESSION NUMBER: EW005193

PUBLICATION DATE: AUG 80

TITLE: CAN PRICES TAME THE INFLATIONARY TIGER?

PERSONAL AUTHOR: BEATTIE, BRUCE R. ; FOSTER, HENRY S.

DESCRIPTOR: ATTITUDES; *ECONOMIC FACTORS; *ECONOMICS; MATHEMATICAL MODELS; NATURAL RESOURCES; *URBAN AREAS; *WATER RATES; *WATER DEMAND; *WATER RESOURCES; *WATER SUPPLY

DESCRIPTIVE NOTE: 441-445P.

ABSTRACT: THIS REPORT FOUND THAT PRICE DOES AFFECT THE CONSUMER'S NEED (DEMAND) FOR A RESOURCE, ACCORDING TO A NATIONWIDE STUDY OF URBAN RESIDENTIAL WATER DEMAND IN THE US. A SINGLE-EQUATION ECONOMETRIC DEMAND MODEL WAS DERIVED FROM THE DATA, WHICH SUGGESTS THAT INCREASING NEED FOR A GOOD OR SERVICE IS A DIRECT FUNCTION OF LOW PRICE. THE AUTHORS BELIEVE THAT BY USING PRICE AS A TOOL, WATER UTILITIES CAN REGULATE USER DEMAND, OFFSET INFLATION, AND DISCOURAGE WATER WASTE.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL; V72 N8

IRIS ACCESSION NUMBER: EW005194
PUBLICATION DATE: AUG 80

TITLE: REEVALUATING HUNTER'S MODEL FOR RESIDENTIAL WATER DEMAND.

PERSONAL AUTHOR: CHAN, WEN-YUNG W.; WANG, LAWRENCE K.

DESCRIPTOR: CONSUMPTION PATTERNS; *HUNTER'S MODEL; MANAGEMENT TOOLS; *MATHEMATICAL MODELS; *PLUMBING FIXTURES; *RESEARCH; THEORIES; *WATER CONSUMPTION; *WATER DEMAND; WATER USE; *WATER SUPPLY

DESCRIPTIVE NOTE: 446-449P.

ABSTRACT: THIS ARTICLE REPORTS THAT IN THE YEARS SINCE HUNTER ESTABLISHED VALUES FOR THE FREQUENCY AND DURATION OF WATER CONSUMPTION AT VARIOUS RESIDENTIAL FIXTURES, HIS ESTIMATES HAVE BEEN INCREASINGLY REGARDED AS TOO HIGH, POSSIBLY LEADING TO OVERSIZING OF WATER SUPPLY PIPING. RECENT DATA CONFIRM THAT FREQUENCY OF USE IS THE MOST IMPORTANT VARIABLE IN HUNTER'S MODEL, AND WITH MORE RESEARCH IN THIS AREA, A MORE ACCURATE HUNTER CURVE CAN BE DERIVED.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL; V72 N8

IRIS ACCESSION NUMBER: EW005195

PUBLICATION DATE: AUG 80

TITLE: THE COSTS OF COMPLIANCE: AN EPA ESTIMATE FOR ORGANICS CONTROL.

PERSONAL AUTHOR: CLARK, ROBERT M.; DORSEY, PAUL

DESCRIPTOR: CONTAMINANTS; *COSTS; DESIGN NEEDS; *DRINKING WATER; ECONOMIC FACTORS; ENVIRONMENTAL PROTECTION AGENCY; *ENVIRONMENTAL REGULATIONS; ENVIRONMENTAL STANDARDS; *GRANULAR ACTIVATED CARBONS; *ORGANIC CHEMICALS; PUBLIC HEALTH; *TRIHALOMETHANES; UTILITIES; *WATER SUPPLY; *WATER QUALITY; *WATER TREATMENT

DESCRIPTIVE NOTE: 450-457P.

ABSTRACT: IN ESTIMATING COSTS FOR THE ORGANICS REGULATIONS THE U.S. ENVIRONMENTAL PROTECTION AGENCY DEVELOPED CAPITAL AND OPERATIONS AND MAINTENANCE COSTS DESIGNS FOR A SERIES OF UNIT PROCESSES AND PRESENTED THEM AS A FUNCTION OF A GIVEN DESIGN PARAMETER. THESE COSTS MAY BE CATAGORIZED AS THOSE ASSOCIATED WITH CONTROL OF TRIHALOMETHANES AND THOSE ASSOCIATED WITH THE INSTALLATION OF GRANULAR ACTIVATED CARBON FOR THE CONTROL OF SYNTHETIC ORGANICS IN FINISHED DRINKING WATER SUPPLIES. THE RESULTING COST INCREASES ARE ESTIMATED AT 5 PERCENT FOR THE FORMER AND 25 PERCENT OR MORE FOR THE LATTER.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL; V72 N8

IRIS ACCESSION NUMBER: EW005196
PUBLICATION DATE: AUG 80

TITLE: EVALUATION AND TREATMENT OF SYNTHETIC ORGANICS IN DRINKING WATER SUPPLIES.

PERSONAL AUTHOR: TRUSSELL, R. RHODES; TRUSSELL, ALBERT R.

DESCRIPTOR: COST BENEFIT ANALYSIS; *DRINKING WATER; ENVIRONMENTAL REGULATIONS; MANAGEMENT; OPERATIONS (WATER); *ORGANIC CHEMICALS; PLANNING; RISK ASSESSMENT; *SYNTHETIC ORGANICS; *TOXIC SUBSTANCES; *WATER QUALITY; WATER SUPPLY; *WATER TREATMENT

DESCRIPTIVE NOTE: 458-470P.

ABSTRACT: SOURCE SURVEYS, SOURCE ANALYSIS, CONTAMINATION PROBLEMS, COST-BENEFIT ANALYSIS, AND FULL-SCALE GRANULAR ACTIVATED CARBON TREATMENT ARE AMONG THE PRACTICAL MEASURES WATER UTILITIES MIGHT EMPLOY IN MEETING REGULATORY REQUIREMENTS FOR THE CONTROL OF SYNTHETIC ORGANIC CONTAMINANTS IN DRINKING WATER. USING THESE STRATEGIES, A UTILITY CAN EVALUATE THE PURITY OF ITS WATER SOURCE, REVIEW THE EFFECTIVENESS OF ITS CURRENT TREATMENT, ASSESS THE EXPOSURE OF VARIOUS COURSES OF ACTION, AND IMPLEMENT A FINAL PLAN.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL; V72 N8

IRIS ACCESSION NUMBER: EW005197

PUBLICATION DATE: AUG 80

TITLE: CONTROL OF TRIHALOMETHANES IN DRINKING WATER.

PERSONAL AUTHOR: DUKE, DONALD T.; AND OTHERS

DESCRIPTOR: AMMONIATION; ANALYTICAL TECHNIQUES; CHEMISTRY; *CHLORINATION; CHLORINE; *DRINKING WATER; KENTUCKY; LABORATORY TECHNIQUES; TESTING; *TOXIC SUBSTANCES; *TRIHALOMETHANE; *WATER QUALITY; *WATER TREATMENT

DESCRIPTIVE NOTE: 470-476P.

ABSTRACT: THE LOUISVILLE (KY) WATER COMPANYS EXPERIENCE CONFIRMS THAT IMPLEMENTATION OF EFFECTIVE TREATMENT METHODS FOR TRIHALOMETHANE (THM) CONTROL IS NEITHER IMPOSSIBLE NOR OVERLY DIFFICULT. METHODS FOR HINDERING THM GROWTH AFTER ITS INITIAL FORMATION, SUCH AS AMMONIATION, HAVE BEEN EXPLORED AND THE TECHNOLOGY FOUND TO BE AVAILABLE, AS IT IS FOR OTHER METHODS OF DISINFECTING WATER SUPPLIES WITHOUT FORMING SIGNIFICANT AMOUNTS OF THMS. EACH PLANT MUST SURVEY ITS INDIVIDUAL NEEDS FOR THM CONTROL AND SELECT THE MOST APPROPRIATE AND ECONOMICAL TECHNOLOGY.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL; V72 N8

IRIS ACCESSION NUMBER: EW005198
PUBLICATION DATE: AUG 80

TITLE: COAGULATION: EXPERIENCES IN ORGANICS REMOVAL.

PERSONAL AUTHOR: SEMMENS, MICHAEL J.; FIELD, TED K.

DESCRIPTOR: *ALUM; ANALYTICAL TECHNIQUES; *COAGULATION; ECONOMIC FACTORS; *GRANULAR ACTIVATED CARBON; MISSISSIPPI RIVER; *ORGANICS REMOVAL; *PH; *PRETREATMENT; *TRIHALOMETHANE; TURBIDITY; ULTRAVIOLET LIGHT ABSORPTION; *WATER TREATMENT

DESCRIPTIVE NOTE: 476-483P.

ABSTRACT: PRETREATMENT IS AN IMPORTANT ASPECT OF GRANULAR ACTIVATED CARBON TECHNOLOGY AND MAY HAVE A SIGNIFICANT INFLUENCE ON CARBON PERFORMANCE AND ECONOMICS. THE RESULTS OF A ONE YEAR STUDY SUGGEST THAT ORGANICS REMOVAL IS EXPEDITED WITH INCREASING ALUM DOSES, AND THAT ALUM DOSES HIGHER THAN THOSE NORMALLY USED FOR TURBIDITY REMOVAL ARE NEEDED TO OBTAIN THE BEST ORGANICS REMOVAL. ALUM DOSE AND PH WERE THE MOST IMPORTANT VARIABLES.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL; V72 N8

IRIS ACCESSION NUMBER: EW005199

PUBLICATION DATE: AUG 80
TITLE: REMOVAL OF TOTAL ORGANIC HALOGEN BY GRANULAR ACTIVATED CARBON ADSORBERS.

PERSONAL AUTHOR: QUINN, JAMES E.; SNOEYINK, VERNON L.

DESCRIPTOR: *ANALYTICAL TECHNIQUES; DRINKING WATER; *EFFLUENT QUALITY; *GRANULAR ACTIVATED CARBON; *HALOGENS; *LABORATORY PROCEDURES; *ORGANICS REMOVAL; TESTING; *TOTAL ORGANIC HALOGEN; *WATER QUALITY; WATER TREATMENT

DESCRIPTIVE NOTE: 483-488P.

ABSTRACT: MEASURING THE GROUP PARAMETER TOTAL ORGANIC HALOGEN (TOX) MAY BE AN ACCEPTABLE ALTERNATIVE TO ANALYZING SPECIFIC COMPOUNDS IN ORDER TO MONITOR WATER QUALITY AND THE EFFICIENCY OF WATER TREATMENT PROCESSES FOR REMOVING POTENTIALLY HAZARDOUS ORGANICS. PRELIMINARY RESULTS INDICATE THAT TOX LEVELS CAN BE USED TO DETERMINE THE DEGREE OF SATURATION OF ACTIVATED CARBON ABSORBERS. ONCE THE RELATIONSHIP BETWEEN ABSORBED TOX AND EFFLUENT QUALITY IS ESTABLISHED, IT SHOULD BE POSSIBLE TO MONITOR ABSORBER PERFORMANCE USING TOX AS THE INDICATOR. ONLY OCCASIONAL CHECKS OF THE RELATIONSHIP BETWEEN EFFLUENT QUALITY AND ABSORBED TOX WOULD THEN BE NECESSARY.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL; V72 N8

IRIS ACCESSION NUMBER: EW005258
TITLE: NONPOINT SOURCE POLLUTION FROM SILVICULTURE - PARTS I AND II.

DESCRIPTOR: *AUDIOVISUAL AIDS; FORESTRY; INSTRUCTIONAL MATERIALS; LAND USE; *MANAGEMENT; *NONPOINT SOURCE POLLUTION; *OPERATIONS; PESTICIDES; *POST SECONDARY EDUCATION; *PLANNING; ROADS; *SILVICULTURE; *WATER POLLUTION CONTROL; WATER RESOURCES; WATER SHEDS

DESCRIPTIVE NOTE: TWO AUDIOVISUAL SLIDE/TAPE PRESENTATIONS. CAN BE BORROWED, FREE OF CHARGE.

ABSTRACT: DISCUSSED IN THIS SLIDE-TAPE PROGRAM ARE WATER POLLUTION RESULTING FROM SILVICULTURAL ACTIVITIES AND HOW THIS POLLUTION CAN BE PREVENTED OR CONTROLLED. POTENTIAL POLLUTANTS FROM FOREST HARVESTING ACTIVITIES ARE IDENTIFIED. SILVICULTURAL ACTIVITIES THAT MAY GENERATE POLLUTION, INCLUDING FOREST TRAILS AND ROADS, CUTTING AND THINNING PRACTICES, REMOVAL METHODS, REFORESTATION, AND FERTILIZERS AND PESTICIDES APPLICATION, ARE DETAILED. PLANNING CONSIDERATIONS AND ALTERNATIVE CONTROL MEASURES ARE PRESENTED.

AVAILABILITY: UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, WATER PLANNING DIVISION-WH554, 401 M STREET, S.W., WASHINGTON, DC 20430

INSTITUTION NAME: HITTMAN ASSOCIATES, INC. 8 EDUCATIONAL COMMUNICATION INC.

IRIS ACCESSION NUMBER: EW005259

TITLE: MECHANICAL MAINTENANCE TRAINING PROGRAM MODULE 3: PACKING AND SEALS.

DESCRIPTOR: *AUDIOVISUAL AIDS; *CENTRIFUGAL PUMPS; *EQUIPMENT; *INSTRUCTIONAL MATERIALS; *INSPECTION; JOB SKILLS; *MAINTENANCE; *PUMPS; *PARAPROFESSIONAL PERSONEL; *POST SECONDARY EDUCATION; *TRAINING PROGRAMS; VIDEOTAPE CASSETTES; VOCATIONAL EDUCATION; *WASTEWATER TREATMENT; *WATER TREATMENT

DESCRIPTIVE NOTE: VIDEO CASSETTE(2), 6 OVERHEADS, MANUAL. THIS MANUAL CAN BE BORROWED FOR A TWO WEEK PERIOD, FREE OF CHARGE.

ABSTRACT: DESCRIBED IN THESE TWO VIDEOCASSETTES, ONE OF FIVE MODULES OF A MAITION OF PREFORMED CHEVRON PACKING IS DISCUSSED. THE PROPER FABRICATNEL, ARE THE PROPER WORK METHODS FOR THE REMOVAL AND INSTALLATION OF CONVENTIONAL PACKING FROM VALVES AND PUMPS. REMOVAL AND INSTALLATION OF PRFORMED CHEVRON PACKING IS DISCUSSED. THE PROPER FABRICATION OF GRAPHITE RING PACKING IS REVIEWED AND THE COMPLETE DISASSEMBLY, INSPECTION AND INSTALLATION OF MECHANICAL SEALS IS HIGHLIGHTED.

AVAILABILITY: UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, NATIONAL TRAINING AND OPERATIONAL TECHNOLOGY CENTER, CINCINNATI, OH 45268

IRIS ACCESSION NUMBER: EW005262
PUBLICATION DATE: 77

TITLE: PERSPECTIVES ON TECHNICAL INFORMATION FOR ENVIRONMENTAL PROTECTION.

DESCRIPTOR: *DECISION MAKING; *ENVIRONMENT; ENVIRONMENTAL INFLUENCES; *ENVIRONMENTAL PROTECTION AGENCY; *FEDERAL REGULATION; FEDERAL ROLE; *INFORMATION DISSEMINATION; POLICIES; *REGULATIONS; SCIENCE EDUCATION; *SCIENTIFIC LITERACY; *SCIENTIFIC PERSONNEL

DESCRIPTIVE NOTE: 108P. PRICE: $6.25

ABSTRACT: THIS REPORT REPRESENTS A BROAD CONSENSUS OF SCIENTISTS AND ENGINEERS WHO HAVE STUDIED THE ACQUISITION AND USE OF SCIENTIFIC INFORMATION BY THE U.S. EPA. THE REPORT INCLUDES: (1) AN INTRODUCTION; (2) THE ROLE OF SCIENTIFIC AND TECHNICAL INFORMATION IN ENVIRONMENTAL REGULATORY DECISION MAKING; (3) OPPORTUNITIES FOR CONGRESSIONAL ACTION; (4) SUMMARY AND RECOMMENDATIONS; (5) AN INDEX TO REPORT FROM THE PREPARING COMMITTEE; AND (6) A ROSTER OF THE PREPARING COMMITTEE.

AVAILABILITY: PRINTING AND PUBLISHING OFFICE, NATIONAL ACADEMY OF SCIENCES, 2101 CONSTITUTION AVENUE, WASHINGTON, D.C. 20418

IRIS ACCESSION NUMBER: EW005264

PUBLICATION DATE: AUG 80

TITLE: TORONTO TURNS SLUDGE INTO ENERGY.

PERSONAL AUTHOR: DASILVA, PAUL

DESCRIPTOR: *COST EFFECTIVENESS; DEWATERING; *ENERGY CONSERVATION; EQUIPMENT; *FACILITIES; HEAT RECOVERY; HEAT TRANSFER; OPERATIONS (WASTEWATER); SLUDGE; SLUDGE CONDITIONING; *SLUDGE DISPOSAL; *WASTE DISPOSAL; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 16-18P.

ABSTRACT: THIS ARTICLE DISCUSSES THE OPERATIONS OF TWO TORONTO, ONTARIO, WASTEWATER TREATMENT PLANTS WHICH ARE BEING EQUIPPED TO BURN SLUDGE AUTOGENOUSLY AND USE THE RECOVERED STEAM TO HEAT THERMAL CONDITIONING UNITS AND BUILDINGS. THIS NEW METHOD OF SLUDGE DISPOSAL IS BEING IMPLEMENTED BECAUSE OF STRICTER ENVIRONMENTAL GUIDELINES ON SLUDGE DISPOSAL, DIMINISHING DISPOSAL SITES, INCREASED HAULING COSTS, AND THE NEED FOR INCREASED ENERGY CONSERVATION. BOTH PLANTS WILL EMPLOY THERMAL SLUDGE CONDITIONING BEFORE DEWATERING, INCINERATION, AND CONVERSION OF WASTE HEAT TO STEAM FOR USE IN THE THERMAL CONDITIONING PROCESS AND AS BUILDING HEAT.

AVAILABILITY: WATER AND WASTES ENGINEERING; V17 N8

IRIS ACCESSION NUMBER: EW005265
PUBLICATION DATE: AUG 80

TITLE: UNDERSTAND WASTEWATER TREATMENT CHEMICAL PROCESSES.

PERSONAL AUTHOR: VIVONA, MORRIS A.

DESCRIPTOR: ANAEROBIC DIGESTION; BIOCHEMICAL OXYGEN DEMAND; DISINFECTION; *CHEMICAL PROCESSES; *CHEMISTRY; CHLORINATION; COST EFFECTIVENESS; ENERGY CONSERVATION; EQUIPMENT; *OPERATIONS (WASTEWATER); *REACTION RATES; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 20-23, 36P.

ABSTRACT: EXAMINED ARE WASTEWATER TREATMENT CHEMICAL PROCESSES, SO THAT THE PLANT OPERATOR CAN MAXIMIZE THE FACTORS WHICH DETERMINE A CHEMICAL PROCESS TRANSFER AND/OR REACTION RATE AND IMPROVE THE EFFICIENCY OF THAT PROCESS. DISCUSSED ARE BIOCHEMICAL OXYGEN DEMAND, PROMOTED SEDIMENTATION, DISINFECTION, CHLORINE RESIDUAL PROBLEMS, TWO-STAGE AERATION SYSTEM, AND COST EFFECTIVENESS.

AVAILABILITY: WATER AND WASTES ENGINEERING; V17 N8

IRIS ACCESSION NUMBER: EW005266

PUBLICATION DATE: AUG 80

TITLE: CONSIDER NON-METALLIC CHAIN'S PROVEN ADVANTAGES.

PERSONAL AUTHOR: DEDINSKY, HENRY; QUANDT, JOHN G.

DESCRIPTOR: CASE STUDIES; *CHAINS; COST EFFECTIVENESS; *EQUIPMENT; *EQUIPMENT EVALUATION; *MAINTENANCE; *PRODUCT DEVELOPMENT; *SLUDGE COLLECTORS; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 26-27P.

ABSTRACT: DISCUSSED ARE THE USE AND TESTING OF NON-METALLIC CHAINS ON SLUDGE COLLECTORS. IN A FOUR YEAR TEST AT A MILWAUKEE TREATMENT PLANT, RESULTS SHOWED THAT THE LIGHT WEIGHT, WEARABILITY, RESISTANCE TO CORROSION, EASE OF INSTALLATION, AND REDUCED MAINTENANCE OF NON-METALLIC CHAIN AND FIBERGLASS FLIGHTS SHOULD INCREASE THEIR USE IN SEWAGE TREATMENT PLANTS WHERE CORROSIVE ENVIRONMENTS LIMIT THE SERVICE LIFE OF CAST IRON CHAIN.

AVAILABILITY: WATER AND WASTES ENGINEERING; V17 N8

IRIS ACCESSION NUMBER: EW005267

PUBLICATION DATE: AUG 80

TITLE: ENERGY CONSERVATION IS A DIRE NECESSITY.

PERSONAL AUTHOR: SAPINSKY, CATHERINE P.

DESCRIPTOR: BIOLOGICAL PHOSPHROUS REMOVAL; CASE STUDIES;

*ENERGY CONSERVATION; *HEAT RECOVERY; INCINERATORS; *MAINTENANCE; METHANE; *OPERATIONS (WASTEWATER); SLUDGE DISPOSAL; SOLAR ENERGY; THERMAL CONDITIONING; WASTE DISPOSAL; WASTE HEAT BOILERS; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 28-32P.

ABSTRACT: EXAMINED IS THE INCREASING NEED FOR ENERGY CONSERVATION IN THE WASTEWATER TREATMENT INDUSTRY. THROUGH NATIONWIDE CASE STUDIES AND REFERENCES TO VARIOUS CONFERENCE PRESENTATIONS, NEW ENERGY EFFICIENT TECHNOLOGIES AND TRADITIONAL ENERGY CONSERVATION PRACTICES ARE DISCUSSED. AMONG THES ARE: THERMAL CONDITIONING OF WASTEWATER SLUDGE, MODIFICATION OF INCINERATORS, WASTE HEAT BOILERS, BIOLOGICAL PHOSPHOROUS REMOVAL, SOLAR HEATED ANAEROBIC DIGESTORS, PLANT MAINTENANCE, AND A COMPREHENSIVE ENERGY INVENTORY TO IDENTIFY SPECIFIC POINTS OF ENERGY USE AND /OR WASTE.

AVAILABILITY: WATER AND WASTES ENGINEERING; V17 N8

IRIS ACCESSION NUMBER: EW005268

PUBLICATION DATE: AUG 80

TITLE: WASTEWATER CHEMICAL AFFECTS PLANT GROWTH.

PERSONAL AUTHOR: KATTERMAN, F. R.; DAY, A. D.

DESCRIPTOR: *AGRONOMY; *CHEMISTRY; CYTOKININ; LABORATORY PROCEDURES; LABORATORY TECHNIQUES; *PLANT GROWTH; *RESEARCH METHODOLOGY; *RESEARCH PROJECTS; *WASTEWATER
DESCRIPTIVE NOTE: 33-35P.

ABSTRACT: REPORTED IS A CURRENT RESEARCH STUDY WHICH ATTEMPTED TO ISOLATE AND IDENTIFY THE OBSERVED CYTOKININ-LIKE FACTOR FROM TREATED WASTEWATER EFFLUENT AND RELATE ITS BIOLOGICAL ACTIVITY WITH THAT OF A STANDARD CYTOKININ. THIS IS A FOLLOW-UP STUDY TO AN EARLIER PROJECT WHICH REVEALED THAT BARLEY IRRIGATED WITH TREATED WASTEWATER PRODUCES TALLER PLANTS, HEAVIER SEEDS, AND HIGHER GRAIN YIELDS. A DETAILED SECTION ON LABORATORY TECHNIQUE IS INCLUDED.

AVAILABILITY: WATER AND WASTES ENGINEERING; V17 N8

IRIS ACCESSION NUMBER: EW005269

PUBLICATION DATE: AUG 80

TITLE: ZERO DISCHARGE: IT WASN'T A COSTLY PIPEDREAM FOR ONE WATERWORKS.

DESCRIPTOR: ALABAMA; COST EFFECTIVENESS; *DESIGN; EQUIPMENT; *FACILITIES; *OPERATIONS (WASTEWATER); POLLUTION CONTROL; *WASTEWATER EFFLUENTS; *WASTEWATER TREATMENT; WATER RESOURCES; *ZERO DISCHARGE

DESCRIPTIVE NOTE: 65-66P.

ABSTRACT: EXAMINED IS A HUNTSVILLE, ALABAMA WATER TREATMENT PLANT WHICH HAS ACHIEVED ZERO DISCHARGE AT LOW COST BY RECYCLING BACKWASH WATER, SAND DRYING SLUDGE, AND UTILIZATION OF ON-SITE BORROW PITS. SPECIFIC ATTENTION IS FOCUSSED ON THE PLANTS FACILITIES AND COST BREAKDOWN.

AVAILABILITY: AMERICAN CITY AND COUNTY; V95 N8

IRIS ACCESSION NUMBER: EW005270

PUBLICATION DATE: AUG 80

TITLE: MAKE SURE YOUR VARIABLE SPEED PUMP PUSHES COSTS DOWN -- AND NOT UP.

PERSONAL AUTHOR: NICHOLAS, WILLIAM G.

DESCRIPTOR: CONTROLLERS; COST BENEFIT ANALYSIS; *COST EFFECTIVENESS; *EQUIPMENT; *EQUIPMENT EVALUATION; *FACILITIES; *PUMPS; VARIABLE SPEED PUMPS; WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 42-44P.

ABSTRACT: THIS ARTICLE REPORTS ON A STUDY THAT CONCLUDES THAT THE COST EFFECTIVENESS OF A CONTROL SYSTEM USING ONE CONTROLLER FOR TWO OR MORE PUMPS IS HIGHLY QUESTIONABLE. THE REPORT EXAMINES LEVEL CONTROLLED TRANSPORT PUMPING SYSTEMS IN DETAIL AND PROVIDES EIGHT REASONS FOR THE QUESTIONABLE COST EFFECTIVENESS.

AVAILABILITY: POLLUTION ENGINEERING, V12 N9

IRIS ACCESSION NUMBER: EW005271

PUBLICATION DATE: NOV 71

TITLE: THE NATION

PERSONAL AUTHOR: WOLMAN, M. GORDON

DESCRIPTOR: CHEMICAL ANALYSIS; ENVIRONMENTAL INFLUENCES; *POLLUTION; RESEARCH REVIEWS (PUBLICATIONS); STANDARDS; TREND ANALYSIS; *WATER POLLUTION CONTROL; WATER RESOURCES

DESCRIPTIVE NOTE: 905-918P.

ABSTRACT: ILLUSTRATES DIFFICULTIES IN MEASURING LONGTERM CHANGES IN WATER TEMPERATURE AND CONTENT OF DISSOLVED OXYGEN, INORGANIC IONS, RADIATION, PESTICIDES, AND TRASH AND DEBRIS BY REFERENCE TO SELECTED U.S. RIVER SYSTEMS. CONCLUDES THAT OBSERVATIONS TO DETECT POLLUTERS MAY NOT PROVIDE DATA FOR ASSESSING TRENDS AND TREND REVERSALS.

AVAILABILITY: SCIENCE; 174; 4012

IRIS ACCESSION NUMBER: EW005275

PUBLICATION DATE: AUG 70

TITLE: THE EFFECTS OF INDUSTRIAL WASTES OF MEMPHIS AND SHELBY COUNTY ON PRIMARY PLANKTONIC PRODUCERS.

PERSONAL AUTHOR: STAUB, R.; AND OTHERS

DESCRIPTOR: *BIOLOGY; *ENVIRONMENT; *POLLUTION; SCIENTIFIC RESEARCH; *WATER POLLUTION CONTROL; PLANKTON

DESCRIPTIVE NOTE: 905-912P.

ABSTRACT: DIVERSITY AND TOTAL NUMBERS OF PLANKTON, PARTICULARLY DIATOMS, WERE ANALYZED AND CORRELATED WITH PHYSICAL FACTORS OF WATER. DIVERSITY INDEX VALUES APPEAR TO PROVIDE AN INDICATION OF POLLUTION OF WATER BY INDUSTRIAL AND DOMESTIC WASTES.

AVAILABILITY: BIOSCIENCE; V20 N16

IRIS ACCESSION NUMBER: EW005276

PUBLICATION DATE: MAY 71

TITLE: WATER QUALITY IN RELATION TO FARM USE OF FERTILIZER.

PERSONAL AUTHOR: VIETS, FRANK G., JR.

DESCRIPTOR: AGRICULTURE; *ENVIRONMENT; *FERTILIZERS; *POLLUTION; *WATER POLLUTION CONTROL; NITROGEN; PHOSPHOROUS

DESCRIPTIVE NOTE: 460-467P.

ABSTRACT: DISCUSSES EVIDENCE OF WATER POLLUTION BY NITROGEN AND PHOSPHOROUS FROM FERTILIZERS. CONCLUDES THAT RESTRICTIONS SHOULD BE ON WATERSHED, NOT STATE OR NATIONAL BASIS. 35 REFERENCES.

AVAILABILITY: BIOSCIENCE; V21 N10

IRIS ACCESSION NUMBER: EW005280

PUBLICATION DATE: AUG 71

TITLE: THE ECONOMIST'S APPROACH TO POLLUTION AND ITS CONTROL.

PERSONAL AUTHOR: SOLOW, ROBERT M.

DESCRIPTOR: *AIR POLLUTION CONTROL; *ECONOMIC FACTORS; GOVERNMENT ROLE; *POLLUTION; RESOURCES; *TAXES; *WATER POLLUTION CONTROL

DESCRIPTIVE NOTE: 498-503P.

ABSTRACT: SHOWS THAT EXCESS POLLUTION ARISES BECAUSE THE WASTE DISPOSAL CAPACITY OF THE ENVIRONMENT IS PROVIDED FREE OF CHARGE. PROPOSES A TAX ON MATERIALS REMOVED FROM THE ENVIRONMENT, WITH REFUNDS VARYING WITH THE METHOD OF DISPOSAL; HARMLESS METHODS OBTAINING FULL REFUND, MOST HARMFUL DISPOSAL ATTRACTING NO REFUND. TAX TO BE BASED ON SOCIAL COST OF MOST HARMFUL DISPOSAL METHOD.

AVAILABILITY: SCIENCE; V173 N3996

IRIS ACCESSION NUMBER: EW005281

PUBLICATION DATE: AUG 71

TITLE: A COURSE ON THE PHYSICS AND CHEMISTRY OF POLLUTION.

PERSONAL AUTHOR: HODGES, LAURENT

DESCRIPTOR: *CHEMISTRY; *COLLEGE SCIENCE; COURSE DESCRIPTIONS; ENVIRONMENT; *ENVIRONMENTAL EDUCATION; *PHYSICS; *POLLUTION

DESCRIPTIVE NOTE: 935-937P.

ABSTRACT: DESCRIBES A COURSE ON ENVIRONMENTAL POLLUTION WHICH STRESSES PHYSICAL AND CHEMICAL PRINCIPLES. COURSE PRESENTS A UNIFIED DISCUSSION OF AIR AND WATER POLLUTION AND SOLID WASTE WITH SPECIAL TREATMENT OF PESTICIDES, THERMAL POLLUTION, RADIOACTIVITY, AND ELECTRIC POWER GENERATION. USES HISTORICAL AND CURRENT STATISTICS EXTENSIVELY TO SEE POLLUTION PROBLEMS IN PERSPECTIVE. ELEMENTARY CHEMISTRY AND PHYSICS ARE THE ONLY PREREQUISITES.

AVAILABILITY: AMERICAN JOURNAL OF PHYSICS; V39 N8

IRIS ACCESSION NUMBER: EW005283

PUBLICATION DATE: APR 80

TITLE: LOOKING AT THE LAWS: ROUNDTABLE DISCUSSION WITH FOUR WHO REALLY KNOW.

PERSONAL AUTHOR: YOUNG, RICHARD A.

DESCRIPTOR: ACID RAIN; *AIR POLLUTION; CLEAN AIR ACT; *ENVIRONMENTAL QUALITY; *FEDERAL GOVERNMENT; *FEDERAL LEGISTATION; LAWS; *LEGISLATION; *POLLUTION ENGINEERING; SULFUR DIOXIDE; *WATER POLLUTION

DESCRIPTIVE NOTE: 34-41P.

ABSTRACT: REVIEWS MAJOR ENVIRONMENTAL LAW ISSUES OF CONCERN IN THE AREA OF POLLUTION ENGINEERING. DISCUSSES RULES AND REGULATIONS UNDER THE CLEAN AIR ACT, ACID RAIN AND VISIBILITY, COAL-BURNING BOILERS, SULFUR DIOXIDE REGULATIONS ON INDUSTRIAL BOILERS, WATER POLLUTION CONTROL, INNOVATIVE TECHNOLOGY, SUPERFUND LEGISLATION, LAW ENFORCEMENT, AND FUTURE MODIFICATIONS OF LAWS OR REGULATIONS.

AVAILABILITY: POLLUTION ENGINEERING; V12 N4

IRIS ACCESSION NUMBER: EW005284
PUBLICATION DATE: APR 80

TITLE: AIR QUALITY MONITORING FOR PSD PERMITS.

PERSONAL AUTHOR: KRUSE, JOHN R.; HOFFNAGLE, GALE F.

DESCRIPTOR: *AIR POLLUTION CONTROL; *CLEAN AIR ACT; ENVIRONMENTAL PROTECTION AGENCY; ENVIRONMENTAL QUALITY; FEDERAL GOVERNMENT; *FEDERAL LEGISLATION; INSTRUMENTATION; MEASUREMENT; *MONITORING; *POLLUTANTS; *POLLUTION ENGINEERING

DESCRIPTIVE NOTE: 43-46P.

ABSTRACT: EXPLAINS VARIOUS POINTS REGARDING THE EPA'S PREVENTION OF SIGNIFICANT DETERIORATION (PSD) RULES UNDER THE CLEAN AIR ACT, INCLUDING WHEN MONITORING IS NOT REQUIRED, PLANNING AND PURPOSE OF MONITORING, WHAT SHOULD BE MONITORED, LOCATION OF MONITORING SITES, REQUIRED INSTRUMENTATION, AND REPORTING REQUIREMENTS. TABLES INCLUDE MAJOR STATIONARY SOURCES, AND REGULATED POLLUTANTS.

AVAILABILITY: POLLUTION ENGINEERING; V12 N4

IRIS ACCESSION NUMBER: EW005285

PUBLICATION DATE: APR 80

TITLE: BOD, COD AND TOD: AFTER TEN YEARS OF TALK.

PERSONAL AUTHOR: KEHOE, THOMAS J.

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *BIOLOGICAL OXYGEN DEMAND; *CHEMICAL OXYGEN DEMAND; INDUSTRIAL WASTES; *LABORATORY PROCEDURES; *MEASUREMENT; MUNICIPAL WASTES; *OPERATIONS (WATER); *TOTAL ORGANIC CARBON; WATER QUALITY; *WATER POLLUTION; *WASTEWATER TREATMENT; *WATER SUPPLY

DESCRIPTIVE NOTE: 49P.

ABSTRACT: REVIEWS AND COMPARES THREE TECHNIQUES FOR ASSESSING THE UNDESIRABLE POLLUTION POTENTIAL OF MUNICIPAL AND INDUSTRIAL WASTEWATER. DETAILED ARE THESE TECHNIQUES: BIOCHEMICAL OXYGEN DEMAND (BOD), CHEMICAL OXYGEN DEMAND (COD), AND TOTAL ORGANIC CARBON (TOC).

AVAILABILITY: POLLUTION ENGINEERING; V12 N4

IRIS ACCESSION NUMBER: EW005286

PUBLICATION DATE: APR 80

TITLE: EARLY DETECTION OF TOXICS.

PERSONAL AUTHOR: SHACHTER, MARVIN L.

DESCRIPTOR: *BIOCHEMISTRY; *ENVIRONMENTAL CONTROL; *INDUSTRIAL HYGIENE; *INDUSTRY; *MONITORING; MEASUREMENT; *OCCUPATIONAL DISEASES; *SAFETY; *TOXIC SUBSTANCES
DESCRIPTIVE NOTE: 50-51P.

ABSTRACT: DISCUSSES BASIC ELEMENTS OF CELLULAR BIOCHEMISTRY UPON WHICH THE PRINCIPLES OF EARLY DETECTION OF DISEASE PROCESSES ARE BASED. ADVOCATES EARLY DETECTION OF TOXIC CONTAMINANTS IN THE INDUSTRIAL ENVIRONMENT AND LISTS THE BENEFITS OF MONITORING THE EXPOSURE OF WORKERS TO TOXIC SUBSTANCES.

AVAILABILITY: POLLUTION ENGINEERING; V12 N4

IRIS ACCESSION NUMBER: EW005287

PUBLICATION DATE: APR 80

TITLE: PREVENTION AND CONTROL OF CHEMICAL SPILL INCIDENTS.

PERSONAL AUTHOR: SHIELDS, EDWARD J.

DESCRIPTOR: ACCIDENT PREVENTION; *CHEMICAL SAFETY; CHEMICAL STORAGE; CHEMICAL TRANSPORT; *CHEMICAL INDUSTRY; *INDUSTRIAL SAFETY; *RECORD KEEPING; *SAFETY; *SPILL PREVENTION; *SPILLS

DESCRIPTIVE NOTE: 52-55P.

ABSTRACT: DISCUSSES THE MAINTENANCE OF AN EFFECTIVE INSPECTION AND RECORD KEEPING PROGRAM TO ENSURE THE PHYSICAL INTEGRITY OF CHEMICAL STORAGE TANKS, PROCESS VESSELS AND THEIR FITTINGS; SPILL CONTROL IN TERMS OF LIQUID LOADING/UNLOADING AND IN-PLANT TRANSFER OPERATIONS; AND VARIOUS SECONDARY CONTAINMENT SYSTEMS OF CHEMICAL STORAGE TANKS AND OTHER SOURCES.

AVAILABILITY: POLLUTION ENGINEERING; V12 N4

IRIS ACCESSION NUMBER: EW005307

PUBLICATION DATE: AUG 80

TITLE: IMPLEMENTATION OF EPA'S MUNICIPAL COMPLIANCE PROGRAM.

PERSONAL AUTHOR: GUTHRIE, D. L.; AND OTHERS

DESCRIPTOR: *ENVIRONMENTAL PROTECTION AGENCY; ENFORCEMENT PROGRAM; *FEDERAL PROGRAMS; *FEDERAL LEGISLATION; GRANTS; *MUNICIPALITIES; *POLICY; *PROGRAM IMPLEMENTATION; PERMITS; REGULATIONS; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 2090-2097P.

ABSTRACT: THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY IS COMING OF AGE. THIS IS DEMONSTRATED BY MATURING INITATIVES IN PERMIT CONSOLIDATION, REGULATORY REFORM, AND GRANTS AND ENFORCEMENT PROGRAM INTEGRATION. A GOOD EXAMPLE OF THIS DEVELOPMENT IS E.P.A.'S "NATIONAL MUNICIPAL POLICY AND STRATEGY", WHICH IS DESCRIBED IN THIS ARTICLE.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION, V52 N8

IRIS ACCESSION NUMBER: EW005308

PUBLICATION DATE: AUG 80

TITLE: COMPARISON OF CHLORINE AND CHLORINE DIOXIDE AS DISINFECTANTS.

PERSONAL AUTHOR: LONGLEY, KARL E.; AND OTHERS

DESCRIPTOR: BIOCIDAL EFFICIENCIES; BACTERICIDES; *CHLORINE; *CHLORINE DIOXIDE; *DISINFECTANTS; *DISINFECTION; *WASTEWATER; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 2098-2105P.

ABSTRACT: STUDY COMPARES THE RELATIVE BIOCIDAL EFFICIENCIES OF CHLORINE AND CHLORINE DIOXIDE IN A WASTEWATER STREAM AT VARIOUS FLOW RATES. RESULTS INDICATE THAT CHLORINE DIOXIDE WAS A SUPERIOR DISINFECTANT RELATIVE TO CHLORINE FOR THE INACTIVATION OF FECAL COLIFORM AND COLIPHAGE, IN WHICH DOSES AND CONCENTRATIONS OF CHLORINE AND CHLORINE DIOXIDE WERE EXPRESSED IN TERMS OF EQUIVATENT CHLORINE.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION, V52 N8

IRIS ACCESSION NUMBER: EW005309

PUBLICATION DATE: AUG 80

TITLE: OPTIMIZATION OF GRIT REMOVAL AT A WASTEWATER TREATMENT PLANT.

PERSONAL AUTHOR: FINGER, RICHARD E.; PARRICK, JAMES

DESCRIPTOR: DEWATERING; FACILITIES; *GRIT REMOVAL; GRIT SEPARATION; *INORGANIC SOLIDS; UTILITIES; *WASTEWATER; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 2106-2116P.

ABSTRACT: ARTICLE DESCRIBES STUDY TO REDUCE OPERATIONAL PROBLEMS DUE TO AN INEFFICIENT GRIT REMOVAL SYSTEM. GRIT SAMPLES WERE ANALYZED FOR TOTAL SOLIDS AND TOTAL VOLATILE SOLIDS, AND SIEVED. EQUIPMENT AND OPERATING PROCEDURES WERE VARIED TO ASSESS THE EFFECT OF AERATION RATE, SCREENING DEVICES AND AIR DIFFUSION UNITS ON GRIT PRODUCTION. THE STUDY SHOWS THAT THE PERFORMANCE OF AN AERATED GRIT REMOVAL SYSTEM CAN BE SUBSTANTIALLY INPROVED BY ADJUSTING AERATION RATE AND DISTRIBUTION.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION, V52 N8

IRIS ACCESSION NUMBER: EW005310

PUBLICATION DATE: AUG 80

TITLE: DETOXIFICATION OF SPECIFIC ORGANIC SUBSTANCES BY WET OXIDATION.

PERSONAL AUTHOR: TIPTON, RANDALL L.; KNOPP, PAUL V.

DESCRIPTOR: *DETOXIFICATION; *INDUSTRIAL WASTES; *MUNICIPAL WASTES; *OXIDATION; *ORGANIC SUBSTANCES; *TOXIC SUBSTANCES; *WASTE DISPOSAL; *WET OXIDATION; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 2117-2130P.

ABSTRACT: DESCRIBED IS A STUDY TO DETERMINE THE ABILITY OF WET OXIDATION TO ACHIEVE MAXIMIUM DESTRUCTION OF TOXIC ORGANIC COMPOUNDS IN MUNICIPAL AND INDUSTRIAL WASTES. RESULTS INDICATE THAT WET OXIDATION IS WELL SUITED FOR THE TREATMENT OF DILUTE AQUEOUS WASTES WHICH ARE UNECONOMICAL TO INCINERATE AND TOO TOXIC FOR BIOLOGICAL TREATMENT.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION, V52 N8

IRIS ACCESSION NUMBER: EW005311

PUBLICATION DATE: AUG 80

TITLE: FLOW AND LOAD VARIATIONS AT WASTEWATER TREATMENT PLANTS.

PERSONAL AUTHOR: MUNKSGAARD, DONALD G. AND YOUNG, JAMES C.

DESCRIPTOR: *DESIGN; EFFLUENTS; *EFFICIENCY; *FACILITIES; *FLOW MEASUREMENT; *LOADING; *PEAK LOADS; PEAK FLOWS; *WASTEWATER; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 2131-2144P.

ABSTRACT: NO SINGLE METHOD IS WIDELY ACCEPTED FOR DETERMINING PEAK FLOWS AND LOADING RATES TO USE IN DESIGNING WASTEWATER TREATMENT PLANTS. THIS ARTICLE DESCRIBES AN ANALYSIS OF 11 FULL-SCALE OPERATING WASTEWATER TREATMENT PLANTS TO DETERMINE THEIR PEAK FLOWS AND LOADS, AND POSSIBLE PREDICTION METHODS. THE RESULTS PROVIDE VALUABLE INFORMATION NECESSARY FOR EFFICIENT PLANT DESIGN. THE AUTHORS STRESS THAT DESIGNERS SHOULD ALWAYS DEVELOP PEAKING FACTORS FOR EACH CITY FOR WHICH THEIR DESIGNS ARE INTENDED. THE ABSENCE OF GOOD OPERATING RECORDS OR WHEN CONDUCTING FEASIBILITY STUDIES, PREPARING FACILITIES PLANS OR MAKING COST ESTIMATES, THE EQUATIONS PRESENTED IN THIS PAPER COULD BE USED, BUT WITH CAUTION, FOR ESTIMATING PEAK FLOWS AND LOADS FOR CERTAIN CITIES.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION, V52 N8

IRIS ACCESSION NUMBER: EW005312
PUBLICATION DATE: AUG 80

TITLE: SEPTAGE TREATMENT AT A MUNICIPAL PLANT.

PERSONAL AUTHOR: SEGALL, BURTON A.; OTT, CHARLES R.

DESCRIPTOR: COSTS; *EXPERIMENTAL PROGRAMS; EFFLUENTS; *SEPTAGE TREATMENT; *SEPTIC TANKS; SLUDGE; *UTILITIES; *WASTEWATER; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 2145-2157P.

ABSTRACT: DESCRIBED ARE THE EFFECTS AND COSTS OF HIGH SEPTAGE LOADING AT A MUNICIPAL WASTEWATER TREATMENT PLANT OPERATED AS AN EXTENDED AERATION PROCESS, LOCATED IN MEDFIELD, MASS. THE AUTHORS CONCLUDED THAT SEPTAGE IS READILY TREATED BIOLOGICALLY WHEN COMBINED WITH DOMESTIC WASTEWATER. THE QUANTITY OF SEPTAGE THAT A WASTEWATER TREATMENT FACITITY CAN HANDLE IS LIMITED BY AVAILABLE AERATION AND/OR SOLIDS HANDLING CAPACITY. THE RESULTS ENABLED RECOMMENDATIONS TO BE MADE FOR DESIGN PARAMETERS FOR NEW FACILITIES FOR DISSOLVED OXYGEN, NITROGEN, SLUDGE PRODUCTION, AND HANDLING.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION, V52 N8

IRIS ACCESSION NUMBER: EW005313

PUBLICATION DATE: AUG 80

TITLE: DETERMINATION OF HCLO PLUS CLO BY BROMINATION OF FLUORESCEIN.

PERSONAL AUTHOR: WILLIAMS, P. M.; ROBERTSON, K. J.

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *BROMINATION; *CHEMICAL ANALYSIS; *CHLORINE; *LABORATORY PROCEDURES; *WATER ANALYSIS

DESCRIPTIVE NOTE: 2167-2173P.

ABSTRACT: DESCRIBES A METHOD FOR THE ANALYSIS OF REACTIVE CHLORINE. THE BASIS OF THE METHOD IS THAT WHEN NORMAL SEAWATER IS CHLORINATED, THE BROMINE IONS IN SEAWATER ARE RAPIDLY AND QUANTITATIVELY OXIDIZED. THE PROCEDURE CAN BE USED WITH VISUAL, SPECTROPHOTOMETRIC, OR FLUOROMETRIC METHODOLOGIES.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION, V52 N8

IRIS ACCESSION NUMBER: EW005314

PUBLICATION DATE: AUG 80

TITLE: AIRBORNE BACTERIAL DENSITIES AT AN ACTIVATED SLUDGE TREATMENT PLANT.

PERSONAL AUTHOR: FEDORAK, P. M.; WESTLAKE, D. W. S.
DESCRIPTOR: AIR POLLUTION; AIRBORNE BACTERIA; *ACTIVATED SLUDGE TREATMENT; *BACTERIA; *DISEASE; *HEALTH HAZARDS; *PUBLIC HEALTH; *SAMPLING; SURVEYS; *WASTEWATER; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 2185-2192P.

ABSTRACT: PRESENTS DATA FROM A SHORT-TERM AEROSOL SAMPLING SURVEY AT THE ACTIVATED SLUDGE PLANT IN EDMONTON, ALBERTA, CANADA. A VARIETY OF OUTDOOR LOCATIONS WERE SAMPLED AND THE OBSERVED BACTERIAL DENSITIES WERE USED AS A BASIS FOR COMPARISON OF THE NUMBERS OF AIRBORNE BACTERIA FOUND IN SUCH INDOOR LOCATIONS AS THE PLANT CONTROL ROOM, THE ANALYTICAL LABORATORY, AND IN AREAS ADJACENT TO WASTEWATER SAMPLING SINKS. TOTAL AIRBORNE BACTERIAL DENSITIES WERE USED AS THE INDICATOR OF AEROSOL CONTAMINATION.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION, V52 N8

IRIS ACCESSION NUMBER: EW005315

PUBLICATION DATE: AUG 80

TITLE: PIPE STORAGE FOR EQUALIZATION OF BACKWASH DISCHARGES TO SANITARY SEWERS.

PERSONAL AUTHOR: RANDOLPH, ROBERT M.; AND OTHERS

DESCRIPTOR: *BACKWASH; *DESIGN; EFFLUENTS; ECONOMICS; *FACILITIES; *HOLDING CAPACITY; *PIPES; *STORAGE; *SANITARY SEWERS; UTILITIES; *WATER TREATMENT; *WASTEWATER

DESCRIPTIVE NOTE: 2193-2198P.

ABSTRACT: THIS PAPER DESCRIBES AN ECONOMICAL AND EFFICIENT STORAGE DESIGN THAT WAS DESIGNED TO HOLD FILTER BACKWASH WASTEWATER FROM WATER TREATMENT PLANTS. INTERIOR STORAGE IS NECESSARY TO EQUALIZE FLOWS, BECAUSE OF THE HIGH FLOW RATES REQUIRED DURING THE BACKWASH CYCLE AND THE LIMITED SEWER CAPACITIES.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION, V52 N8

IRIS ACCESSION NUMBER: EW005316

PUBLICATION DATE: AUG 80

TITLE: SEPTIC SYSTEM LONGEVITY INCREASED BY IMPROVED DESIGN.

PERSONAL AUTHOR: HILL, D. E.; FRINK, C. R.

DESCRIPTOR: *DESIGN; *OPERATIONS (WASTEWATER); *PUBLIC HEALTH; *RESEARCH; *SEPTIC SYSTEMS; SOIL TYPE; STATE REGULATIONS

DESCRIPTIVE NOTE: 2199-2203P.

ABSTRACT: DESCRIBES AN ANALYSIS OF THE RECORDS OF 3156 SEPTIC SYSTEMS. RESULTS REVEAL A 9-YEAR INCREASE IN LONGEVITY IN THE POPULATION OF ALL SYSTEMS FROM 1973 TO 1978. IT ALSO HAS SHOWN A DECREASE IN THE AVERAGE RATE OF PREMATURE FAILURES FROM 6.0 TO 2.9% IN EACH YEAR CLASS OF INSTALLATION.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION, V52 N8

IRIS ACCESSION NUMBER: EW005317

PUBLICATION DATE: AUG 80

TITLE: HIGH PH TREATMENT OF COMBINED WATER SOFTENING AND WASTEWATER SLUDGES.

PERSONAL AUTHOR: DAGUE, RICHARD R.; AND OTHERS

DESCRIPTOR: *ALKALINITY; DEWATERING; *OPERATIONS (WASTEWATER); *PH; PATHOGENS; *SLUDGE DISPOSAL; *STABILIZATION; WASTE DISPOSAL; *WATER SOFTENING; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 2204-2219P.

ABSTRACT: EXAMINED WAS HIGH PH STABILIZATION OF COMBINED WATER SOFTENING AND WASTEWATER SLUDGES. THE AUTHORS INVESTIGATED THE LEVELS OF PH AND TIMES REQUIRED FOR SATISFACTORY KILLS OF INDICATOR ORGANISMS IN THE SLUDGE. THE RESULTS INDICATED THAT EFFECTIVE STABILIZATION OF SEPARATE PRIMARY WASTEWATER SLUDGE AND COMBINED PRIMARY AND WASTE ACTIVATED SLUDGE CAN BE ACHIEVED IN LESS THAN 24 HOURS.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION, V52 N8

IRIS ACCESSION NUMBER: EW005318

PUBLICATION DATE: AUG 80

TITLE: COST-EFFECTIVE COMBINED SEWER OVERFLOW POLLUTION ABATEMENT PLANNING.

PERSONAL AUTHOR: KAUFMAN, H. L.; LAI, FU-HSIUNG

DESCRIPTOR: *COST EFFECTIVENESS; DESIGN; *MATHEMATICAL MODELS; *OVERFLOW POLLUTION; *PLANNING; *SURFACE RUNOFF; *SEWERS; *SEWER OVERFLOW; *WATER POLLUTION; *WATER POLLUTION CONTROL

DESCRIPTIVE NOTE: 2220-2229P.

ABSTRACT: ECONOMIC METHODS FOR THE ABATEMENT OF SEWER OVERFLOW POLLUTION ARE EXAMINED. NONSTRUCTUTAL ALTERNATIVES, SUCH AS SEWER FLUSHING, STREET SWEEPING AND SYSTEMATIC COMPONENT INTERACTION ANALYSIS ARE EXPLORED. TWO MATHEMATICAL MODELS ARE USED: THE ENVIRONMENTAL PROTECTION AGENCYS STORM WATER MANAGEMENT MODEL AND THE CORPS OF ENGINEERS STORAGE, TREATMENT, OVERFLOW AND RUNOFF MODEL.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION, V52 N8

IRIS ACCESSION NUMBER: EW005319

PUBLICATION DATE: AUG 80

TITLE: PRETREATMENT OF INDUSTRIAL DISCHARGES TO PUBLICLY OWNED TREATMENT WORKS.

PERSONAL AUTHOR: ONGERTH, JERRY E.; DEWALLE, FOPPE B.

DESCRIPTOR: *CHEMICAL ANALYSIS; FACILITIES; HEAVY METALS; *INDUSTRIAL WASTES; LEGISLATION; MUNICIPALITIES; ORGANIC POLLUTANTS; *PRETREATMENT; STANDARDS; *UTILITIES; *WASTEWATER TREATMENT; *WATER POLLUTION

DESCRIPTIVE NOTE: 2246-2256P.

ABSTRACT: ARTICLE DESCRIBES RESEARCH OF INDUSTRIAL WASTES IN MUNICIPAL WASTEWATER TREATMENT WORKS. THE MAJOR INDUSTRIAL DISCHARGES TO THE SEWER NETWORK WERE EXAMINED, AND THE VOLUME AND CHEMICAL COMPOSITION OF WASTE WAS CALCULATED. A PRETREATMENT PROGRAM WAS APPLIED FOR THE CONTROL OF ORGANIC PRIORITY POLLUTANTS. RESULTS INDICATED THAT THE PROCESS WAS EFFECTIVE AND ALLOWED EVALUATION OF THE REQUIREMENTS FOR ITS APPLICATION.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION, V52 N8

IRIS ACCESSION NUMBER: EW005320

PUBLICATION DATE: AUG 80

TITLE: ANAEROBIC ROTATING BIOLOGICAL CONTACTOR FOR CARBONACEOUS WASTEWATERS.

PERSONAL AUTHOR: TAIT, SCOTT J.; FRIEDMAN, A. A.

DESCRIPTOR: ACTIVATED SLUDGE; *ANAEROBIC TREATMENT; *BIOLOGICAL CONTACTORS; *CARBONACEOUS WASTEWATER; *COST EFFECTIVENESS; *DESIGN; EQUIPMENT; FACILITIES; *ORGANIC POLLUTION; PILOT PLANTS; *WASTEWATER; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 2257-2269P.

ABSTRACT: RESEARCH ASCERTAINS THE CONDITIONS WHEREBY ANAEROBIC NONMETHANOGENIC AND METHANOGENIC MICROORGANISMS CAN SUCCESSFULLY BE GROWN ON ROTATING BIOLOGICAL CONTACTOR DISK SURFACES. MODELS WERE DEVELOPED FOR PREDICTING THE REMOVAL OF SOLUBLE ORGANIC SUBSTRATES AS A FUNCTION OF STRENGTH AND FEED FLOW RATE.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION, V52 N8

IRIS ACCESSION NUMBER: EW005321

PUBLICATION DATE: AUG 80

TITLE: RELATIONSHIP OF DESIGN CAPACITY TO EFFLUENT QUALITY.

PERSONAL AUTHOR: HEARTH, DOUGLAS E.

DESCRIPTOR: COST EFFECTIVENESS; *DESIGN; *EFFLUENTS; *ENVIRONMENTAL IMPACT; FACILITIES; MUNICIPALITIES; RESEARCH; SEWAGE; *SEWAGE WORKS; *WASTEWATER TREATMENT PLANTS; WATER QUALITY

DESCRIPTIVE NOTE: 2270-2275P.

ABSTRACT: TO DEFINE THE RELATIONSHIP OF TREATMENT PLANT DESIGN CAPACITY TO EFFLUENT QUALITY, DAILY PERFORMANCE REPORTS WERE EXAMINED FROM A SAMPLE OF 29 MUNICIPAL WASTEWATER TREATMENT PLANTS SELECTED TO MINIMIZE THE EXTRANEOUS INFLUENCES OF WEATHER, PROCESS, AGE, AND OVERLOADING. EIGHT EFFLUENT QUALITY VARIABLES WERE GENERATED; MONTHLY MEANS AND EXTREMES OF BIOCHEMICAL OXYGEN DEMAND AND SUSPENDED SOLIDS EXPRESSED AS CONCENTRATIONS AND PERCENTAGES OF REMOVAL. EACH WAS REGRESSED ON DESIGN CAPACITY. F-TESTS ON THE SLOPES OF THE REGRESSION LINES INDICATE THAT CAPACITY IS OFTEN NOT SIGNIFICANTLY RELATED TO EFFLUENT QUALITY AT THE 0.01 CONFIDENCE LEVEL, AND, THAT WHEN A SIGNIFICANT RELATIONSHIP EXISTS, SMALL PLANTS PERFORM BETTER THAN LARGE ONES. THIS FINDING REFUTES THE ALLEGED ECOLOGICAL BENEFIT OF HIGHLY CENTRALIZED SEWERAGE, ALLOWING DECENTRALIZED SEWERAGE TO EMERGE AS ENVIRONMENTALLY SUPERIOR BECAUSE OF ITS UNDISPUTED ADVANTAGES OF SPATIALLY DISPERSED WASTELOAD AND MINIMAL HYDROLOGIC IMPACT.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION, V52 N8

IRIS ACCESSION NUMBER: EW005462

PUBLICATION DATE: 79

TITLE: SOLAR ENERGY UTILIZATION.

PERSONAL AUTHOR: MICHELS, TIM

DESCRIPTOR: ALTERNATIVE TECHNOLOGY; ARCHITECTURE; CLIMATIC FACTORS; CONSERVATION; CONSTRUCTION; *DESIGN; *ENERGY CONSERVATION; *HEATING SYSTEMS; HEAT TRANSFER; PLANNING; *SOLAR COLLECTORS; *SOLAR ENERGY

DESCRIPTIVE NOTE: 248P. PRICE: $18.50

ABSTRACT: THIS BOOK DISCUSSES ENERGY CONSERVATION AND SOLAR ENERGY APPLICATION FROM A DESIGN/ARCHITECTURAL POINT OF VIEW. CHAPTERS INCLUDED IN THIS BOOK EXAMINE ENERGY CONSERVATION, THE GEOMETRY AND PHYSICS OF SOLAR RADIATION, SOLAR ENERGY COLLECTORS, SOLAR ENERGY STORAGE DEVICES, AND SIZING OF SOLAR SYSTEMS. DESIGN APPLICATIONS FOR RESIDENTIAL STRUCTURES STRESS ENERGY CONSERVATION THROUGH PROPER PLACEMENT AND CONSTRUCTION OF WINDOWS, WALLS, CEILINGS AND FLOORS, INSULATION, AND LANDSCAPING IN ADDITION, PASSIVE AND ACTIVE COLLECTORS AND STORAGE DEVICES, AND PHOTOVOLTAICS ARE DISCUSSED. SOLAR SYSTEM SIZING INCLUDES DISCUSSION ON STORAGE DYNAMICS, CLIMATIC DATA, AND SYSTEM EFFICIENCY AND CAPABILITY. A NUMBER OF TABLES AND FIGURES ILLUSTRATE EACH TOPIC AND EACH CHAPTER CONTAINS FOOTNOTES. A DETAILED APPENDIX CONTAINS INFORMATION ON DEGREE DAYS AND SOLAR RADIATION FOR THE U.S., CONCENTRATING COLLECTORS, SOLAR HOME DESIGN, ENERGY CONSERVATION ANALYSIS TECHNIQUE, HEAT TRANSFER AND CONVERSION FACTORS.

AVAILABILITY: AEE ENERGY BOOKS, DEPT. 803, 4025 PLEASANTDALE ROAD, SUITE 340, ATLANTA, GA 30340

IRIS ACCESSION NUMBER: EW005463

PUBLICATION DATE: 80

TITLE: SELECTED WATER RESOURCES ABSTRACTS. ANNUAL CUMULATED INDEXES TO VOLUME 12, 1979. PART 1. AUTHOR, ORGANIZATION, ACCESSION NUMBER.

DESCRIPTOR: *ABSTRACTS; ARID LANDS; ECONOMICS; EUTROPHICATION; HYDROLOGY; IRRIGATION; LEGISLATION; MODELS; MANAGEMENT; NUCLEAR RADIATION; PLANNING; POLICY; PULP INDUSTRY; PAPER INDUSTRY; *WATER QUALITY; WELL CONSTRUCTION; *WATER RESOURCES; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 570P. PRICE: $25.00

ABSTRACT: THIS SEMIMONTHLY JOURNAL INCLUDES ABSTRACTS OF CURRENT AND EARLIER PERTINENT MONOGRAPHS, JOURNAL ARTICLES, REPORTS, AND OTHER PUBLICATION FORMATS. THE CONTEXT OF THESE DOCUMENTS COVER THE WATER RELATED ASPECTS OF THE LIFE, PHYSICAL, AND SOCIAL SCIENCES AS WELL AS RELATED ENGINEERING AND LEGAL ASPECTS OF THE CHARACTERISTICS, CONSERVATION, CONTROL, USE, AND MANAGEMENT OF WATER. EACH ABSTRACT INCLUDES A FULL BIBLIOGRAPHICAL CITATION AND A SET OF DESCRIPTORS OR IDENTIFIERS WHICH ARE LISTED IN THE WATER RESOURCES THESAURUS (SECOND EDITION, 1971).

AVAILABILITY: NATIONAL TECHNICAL INFORMATION CENTER, OPERATIONS DIVISION, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

INSTITUTION NAME: WATER RESOURCES SCIENTIFIC INFORMATION CENTER.

IRIS ACCESSION NUMBER: EW005464

PUBLICATION DATE: 80

TITLE: SELECTED WATER RESOURCES ABSTRACTS. ANNUAL CUMULATION INDEXES TO VOLUME 12, 1979. PART 2. SUBJECT.

DESCRIPTOR: *BIBLIOGRAPHIES; *BIOLOGICAL SCIENCES; HYDROLOGY; IRRIGATION; LEGISLATION; MANAGEMENT; *PHYSICAL SCIENCES; PLANNING; SOCIAL SCIENCES; *WATER QUALITY; *WATER RESOURCES; *WASTEWATER TREATMENT; *WATER TREATMENT

DESCRIPTIVE NOTE: 806P. PRICE: $25.00

ABSTRACT: THIS SEMIMONTHLY JOURNAL INCLUDES ABSTRACTS OF CURRENT AND EARLIER PERTINENT MONOGRAPHS, JOURNAL ARTICLES, REPORTS, AND OTHER PUBLICATION FORMATS. THE CONTEXT OF THESE DOCUMENTS COVER THE WATER RELATED ASPECTS OF THE LIFE, PHYSICAL, AND SOCIAL SCIENCES AS WELL AS RELATED ENGINEERING AND LEGAL ASPECTS OF THE CHARACTERISTICS, CONSERVATION, CONTROL, USE AND MANAGEMENT OF WATER. EACH ABSTRACT INCLUDES A FULL BIBLIOGRAPHICAL CITATION AND A SET OF DESCRIPTORS OR IDENTIFIERS WHICH ARE LISTED IN THE WATER RESOURCES THESAURUS (SECOND EDITION, 1971). EACH ABSTRACT ENTRY IS CLASSIFIED INTO TEN FIELDS AND SIXTY GROUPS SIMILAR TO THE WATER RESEARCH CATEGORIES ESTABLISHED BY THE COMMITTEE ON WATER RESOURCES RESEARCH OF THE FEDERAL COUNCIL FOR SCIENCE AND TECHNOLOGY.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION CENTER, OPERATIONS DIVISION, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

INSTITUTION NAME: WATER RESOURCES INFORMATION CENTER.

IRIS ACCESSION NUMBER: EW005465

PUBLICATION DATE: SEP 80

TITLE: LABORATORY SUPPLY HOUSES.

DESCRIPTOR: *CHEMISTRY; *LABORATORY SUPPLIES; *LABORATORIES; *LABORATORY EQUIPMENT; *MEASUREMENT EQUIPMENT; *SCIENCE EQUIPMENT

DESCRIPTIVE NOTE: 33-36P.

ABSTRACT: THIS ARTICLE PROVIDES A LISTING OF MAIN DEALER LOCATIONS AND BRANCH OFFICES OF LABORATORY SUPPLY HOUSES. THE OFFICES ARE LISTED BY REGION, STATE AND CITY.

AVAILABILITY: ANALYTICAL CHEMISTRY, V52 N10

IRIS ACCESSION NUMBER: EW005466

PUBLICATION DATE: SEP 80

TITLE: INSTRUMENTS, EQUIPMENT, AND SUPPLIES.

DESCRIPTOR: CHEMISTRY; *CHEMICAL ANALYSIS; *INSTRUMENTATION; *LABORATORY SUPPLIES; *LABORATORY EQUIPMENT; *MEASUREMENT EQUIPMENT; *MANUFACTURERS; *SCIENCE EQUIPMENT

DESCRIPTIVE NOTE: 39-208P.

ABSTRACT: MANUFACTURERS OF CHEMICAL INSTRUMENTS, EQUIPMENT, AND SUPPLIES ARE LISTED ALPHABETICALLY UNDER THEIR MAIN PRODUCT. ADDRESS AND TELEPHONE NUMBERS OF LISTED MANUFACTURERS MAY BE FOUND IN THE COMPANY DIRECTORY, SECTION 9, OF THE LABGUIDE.

AVAILABILITY: ANALYTICAL CHEMISTRY, V52 N10

IRIS ACCESSION NUMBER: EW005467

PUBLICATION DATE: SEP 80

TITLE: ENVIRONMENTAL MONITORING.

DESCRIPTOR: *CHEMISTRY; CHEMICAL ANALYSIS; ENVIRONMENTAL STANDARDS; *ENVIRONMENTAL RESEARCH; ENVIRONMENTAL TECHNICIANS; *INSTRUMENTATION; *LABORATORY EQUIPMENT; *MEASUREMENT EQUIPMENT; *MANUFACTURERS; SCIENCE EQUIPMENT

DESCRIPTIVE NOTE: 213-218P.

ABSTRACT: PRODUCTS ARE LISTED IN AN ALPHABETICAL LISTING. EACH PRODUCT IS FOLLOWED BY AN ALPHABETICAL LISTING OF MANUFACTURERS.

AVAILABILITY: ANALYTICAL CHEMISTRY, V52 N10

IRIS ACCESSION NUMBER: EW005468

PUBLICATION DATE: SEP 80

TITLE: LABORATORY CHEMICALS.

DESCRIPTOR: *CHEMICALS; *CHEMISTRY; CHEMICAL ANALYSIS; *CHEMICAL INDUSTRY; *LABORATORY EQUIPMENT; *MANUFACTURERS; *SCIENCE EQUIPMENT

DESCRIPTIVE NOTE: 221-248P.

ABSTRACT: ALPHABETICAL LISTING OF LABORATORY CHEMICAL MANUFACTURERS. THE MANUFACTURERS ARE LISTED UNDER CHEMICAL CATEGORIES. ADDRESSES AND TELEPHONE NUMBERS OF MANUFACTURERS ARE LISTED IN THE COMPANY DIRECTORY, SECTION 9, OF THE LABGUIDE.

AVAILABILITY: ANALYTICAL CHEMISTRY, V52 N10

IRIS ACCESSION NUMBER: EW005469

PUBLICATION DATE: SEP 80

TITLE: RESEARCH AND ANALYTICAL SERVICES.

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *CHEMISTRY; *CHEMICAL ANALYSIS; *ENVIRONMENTAL RESEARCH; *MEASUREMENT; *SCIENTIFIC RESEARCH; *SUPPLIERS; *SERVICE ORGANIZATIONS; *TESTING

DESCRIPTIVE NOTE: 251-257P.

ABSTRACT: ALPHABETICAL LISTING OF SUPPLIERS OF RESEARCH AND ANALYTICAL SERVICES. ADDRESSES AND TELEPHONE NUMBERS OF THESE SUPPLIERS ARE GIVEN IN THE COMPANY DIRECTORY.

AVAILABILITY: ANALYTICAL CHEMISTRY, V52 N10

IRIS ACCESSION NUMBER: EW005470
PUBLICATION DATE: SEP 80

TITLE: OPTIMAL DESIGN OF WATER CONVEYANCE SYSTEMS.

PERSONAL AUTHOR: MARTIN, QUENTIN W.

DESCRIPTOR: CANALS; COSTS; DAMS; *DESIGN; DYNAMIC PROGRAMMING; *ECONOMIC ANALYSIS; HYDRAULICS; MATHEMATICAL MODELS; *PIPELINES; SYSTEMS ENGINEERING; TEXAS; *WATER SUPPLY; *WATER CONVEYANCE SYSTEMS; WATER DISTRIBUTION; *WATER RESOURCES

DESCRIPTIVE NOTE: 1415-1433P.

ABSTRACT: A COMPUTATIONAL METHODOLOGY IS DESCRIBED FOR ESTABLISHING THE MINIMUM COST ROUTE LOCATION AND ENGINEERING DESIGN FOR A WATER CONVEYANCE SYSTEM DELIVERING A FIXED FLOW RATE TO A SINGLE DELIVERY POINT FROM ONE OF A NUMBER OF POSSIBLE WATER SOURCES. THE POSSIBLE ROUTE SECTIONS ARE REPRESENTED AS ARCS IN A NETWORK. A DYNAMIC PROGRAMMING ALGORITHM IS UTILIZED TO ESTABLISH THE OPTIMAL NUMBER AND SIZE OF PUMPING STATIONS; THE BOTTOM WIDTH AND DEPTH DIMENSIONS AND SURFACE LINING OF OPEN CHANNELS; THE DIAMETER, PRESSURE CLASS AND NUMBER OF PARALLEL LINES OF INSTALLED PIPES; AND THE HEIGHT OF EMBANKMENT DAMS ALONG THE ROUTE SECTIONS IN THE CONVEYANCE SYSTEM. THE DESIGN AND COST OF ASSOCIATED APPURTENANCES AND STRUCTURES ARE CONSIDERED. THE APPLICATION OF THE ALGORITHM AS CODED IN THE CANAL-I COMPUTER PROGRAM, IS ILLUSTRATED FOR SEVERAL POTENTIAL WATER CONVEYANCE PROJECTS IN TEXAS.

AVAILABILITY: JOURNAL OF THE HYDRAULICS DIVISION; V106 N9

IRIS ACCESSION NUMBER: EW005471

PUBLICATION DATE: SEP 80

TITLE: COVERGING FLOW MODEL APPLIED TO URBAN CATCHMENT.

PERSONAL AUTHOR: ELLIS, FRANKLIN W.; AND OTHERS

DESCRIPTOR: *HYDROLOGY; *KINEMATICS; MARYLAND; *MATHEMATICAL MODELS; *OVERLAND FLOW; PRECIPTATION; *RUNOFF; *STORMWATER; *SURFACE RUNOFF; *URBAN AREAS; WATER RUNOFF; *WATERSHEDS

DESCRIPTIVE NOTE: 1457-1470P.

ABSTRACT: A CONVERGING KINEMATIC WAVE OVERLAND FLOW MODEL WAS APPLIED TO AN URBAN CATCHMENT, ROCK CREEK WATERSHED IN MARYLAND. THE 2-PARAMETER MODEL WAS CALIBRATED AND GAVE REASONABLE PREDICTIONS FOR HYDROGRAPH SHAPE AS WELL AS PEAK FLOW. TWO METHODS FOR ESTIMATING ABSTRACTIONS FROM GROSS PRECIPITATION WERE APPLIED. THE FIRST WAS A GENERALIZATION OF A STANDARD INFILTRATION EQUATION AND THE SECOND USED A LINEAR REGRESSION BETWEEN DIRECT RUNOFF AND GROSS PRECIPITATION. THE FAIRLY ACCURATE RESULTS SUGGEST THAT THE CONVERGING FLOW MODEL IS IDEAL FOR A VARIETY OF USES IN URBAN HYDROLOGY.

AVAILABILITY: JOURNAL OF THE HYDRAULICS DIVISION, V106 N9

IRIS ACCESSION NUMBER: EW005472

PUBLICATION DATE: SEP 80

TITLE: OPTIMAL DESIGN OF GRAVITY FLOW WATER CONDUITS.

PERSONAL AUTHOR: CANALES-RUIZ, ROBERTO

DESCRIPTOR: *AQUEDUCTS; COSTS; *DESIGN; MATHEMATICAL MODELS; *PIPE FLOW; *PIPES; PUMPS; *WATER CONDUITS; *WATER SUPPLY

DESCRIPTIVE NOTE: 1489-1502P.

ABSTRACT: A METHOD BASED ON THE PONTRYAGIN MAXIMUM PRINCIPLE FOR THE OPTIMAL DESIGN OF WATER CONDUITS IS DESCRIBED. EVEN THOUGH THE METHOD IS GENERAL, THE DESIGN OF GRAVITY WATER CONDUITS USING ONLY A DISCRETE SET OF DIAMETERS IS TREATED IN DETAIL. IT IS SHOWN HOW THE DESIGN PROBLEM CAN BE REDUCED TO A TWO POINT BOUNDARY VALUE PROBLEM, AND A GRAPHICAL METHOD FOR ITS SOLUTION IS PRESENTED. TWO DESIGN EXAMPLES ARE INCLUDED. THE CONDITIONS THAT SHOULD BE MODIFIED TO DEAL WITH OTHER DESIGN PROBLEMS, SUCH AS THOSE CONSIDERING PUMPING COSTS, ARE INDICATED.

AVAILABILITY: JOURNAL OF THE HYDRAULICS DIVISION; V106 N9

IRIS ACCESSION NUMBER: EW005473

PUBLICATION DATE: SEP 80

TITLE: AQUASOLS: THE BEHAVIOR OF SMALL PARTICLES IN AQUATIC SYSTEMS.

PERSONAL AUTHOR: O'MELIA, CHARLES R.

DESCRIPTOR: *AQUASOLS; AQUATIC SYSTEMS; *FACILITIES; FILTRATION; FLOCCULATION; PARTICULATE REMOVAL; *PARTICULATES; SEDIMENTATION; SOLID PARTICLES; *WASTEWATER TREATMENT; WATER POLLUTION; *WATER QUALITY

DESCRIPTIVE NOTE: 1052-1060P.

ABSTRACT: DESCRIBED ARE CERTAIN PHYSICAL PROCESSES THAT AFFECT THE TRANSPORT AND FATE OF SOLID PARTICLES IN AQUATIC SYSTEMS, AND TO ILLUSTRATE, USING CASE STUDIES, THE UNDERSTANDING OF THESE PROCESSES AND THE EXTENT OF THEIR EFFECTS.

AVAILABILITY: ENVIRONMENTAL SCIENCE AND TECHNOLOGY; V14 N9

IRIS ACCESSION NUMBER: EW005474

PUBLICATION DATE: SEP 80

TITLE: TRACE METAL CATALYSIS IN AQUATIC ENVIRONMENTS.

PERSONAL AUTHOR: HOFFMANN, MICHAEL R.

DESCRIPTOR: *AQUATIC SYSTEMS; AUTOXIDATION REACTIONS; CHEMICAL REACTIONS; HYDROLYSIS REACTIONS; REDOX REACTIONS; *TRACE METALS; *TRACE METAL CATALYSIS; *WATER POLLUTION CONTROL

DESCRIPTIVE NOTE: 1061-1066P.

ABSTRACT: EXPLORED ARE THE POSSIBLE ROLES THAT TRACE METALS MAY PLAY IN THE CATALYSIS OF AQUATIC REACTIONS. SPECIFIC FOCUS IS ON THE KINETIC AND MECHANISTIC ASPECTS OF HYDROLYSIS, REDOX, AND AUTOXIDATION REACTIONS, AND THE APPLICABILITY OF CERTAIN CATALYTIC REACTIONS FOR POLLUTION CONTROL.

AVAILABILITY: ENVIRONMENTAL SCIENCE AND TECHNOLOGY; V14 N9

IRIS ACCESSION NUMBER: EW005475

PUBLICATION DATE: SEP 80

TITLE: GAUGING THE EFFECT OF REGULATION ON UTILITY OPERATIONS.

DESCRIPTOR: *ENVIRONMENT; FEDERAL STATE RELATIONSHIPS; *MANAGEMENT; *OPERATIONS (WATER); *REGULATIONS; *SAFE DRINKING WATER ACT; *STANDARDS; *UTILITIES; *WATER QUALITY; *WATER TREATMENT

DESCRIPTIVE NOTE: 15,18-22, 44-46P.

ABSTRACT: THE PROVISIONS OF THE SAFE DRINKING WATER ACT HAVE BEEN TRANSLATED INTO REGULATIONS GOVERNING A SWEEPING RANGE OF FACTORS AFFECTING WATER QUALITY, FROM TESTING TO TREATING. HOW SUCH REGULATIONS AFFECT WATER UTILITY OPERATION WAS THE SUBJECT OF THIS DISCUSSION BY OFFICIALS FROM THE AWWA, USEPA, STATE HEALTH DEPARTMENTS, AND PRIVATE WATER WORKS AND ENGINEERING FIRMS.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL, V72 N9

IRIS ACCESSION NUMBER: EW005476

PUBLICATION DATE: SEP 80

TITLE: KEEPING A CENTURY-OLD WATER SYSTEM YOUNG.

PERSONAL AUTHOR: JACKSON, RAY A.

DESCRIPTOR: *EQUIPMENT; *FACILITIES; HYDRANTS; *MAINTENANCE; *OPERATIONS (WATER); *PIPES; *UTILITIES; VALVES; *WATER DISTRIBUTION

DESCRIPTIVE NOTE: 492-495P.

ABSTRACT: LIKE MANY CITIES, RICHMOND, VIRGINIA, FACES IN ADDITION TO THE NORMAL MAINTENANCE PROBLEMS THE COMPLICATION RESULTING FROM AN AGING SYSTEM ENCOMPASSING A VARIETY OF MATERIALS INSTALLED OVER A SPAN OF MANY YEARS. AN IMPORTANT PART OF RICHMOND'S REJUVENATION EFFORT HAS BEEN THE STANDARDIZATION OF PIPING, VALVES, AND HYDRANTS. THE UTILITIES EXPERIENCES ARE RELEVANT NOT ONLY TO OTHER NOW-ELDERLY SYSTEMS BUT TO ALL THOSE WHOSE OWN CENTURY MARK IS BUT A MATTER OF TIME.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL, V72 N9

IRIS ACCESSION NUMBER: EW005477

PUBLICATION DATE: SEP 80

TITLE: THE WHY, WHAT, AND HOW OF MAINTAINING SYSTEM RECORDS.

PERSONAL AUTHOR: LUKSA, ROBERT A.

DESCRIPTOR: ECONOMIC FACTORS; FINANCIAL PLANNING; LEGAL RESPONSIBILITY; MAINTENANCE; *MANAGEMENT TOOLS; MANPOWER UTILIZATION; *OPERATIONS (WATER); *RECORD KEEPING; *UTILITY MANAGEMENT; *WATER DISTRIBUTION; *WATER SUPPLY

DESCRIPTIVE NOTE: 496-500P.

ABSTRACT: COMPLETE, UP-TO-DATE RECORDS, INCLUDING AS-BUILT DRAWINGS, ARE NOT MERE PAPERWORK BUT ESSENTIAL TOOLS FOR PROMOTING EFFICIENT MANAGEMENT OF DISTRIBUTION SYSTEM COMPONENTS AND FOR PROVIDING BACKGROUND DATA NEEDED FOR SOUND UTILITY MANAGEMENT. THIS ARTICLE INCLUDES SECTIONS ON FINANCIAL PLANNING AND MANPOWER DEPLOYMENT, COMPREHENSIVE PLANNING, COMMUNICATIONS, MANAGEMENT AUDITS, AND LEGAL REQUIREMENTS AND LIABILITY.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL, V72 N9

IRIS ACCESSION NUMBER: EW005478

PUBLICATION DATE: SEP 80

TITLE: CONTROLLING THE COST OF SYSTEM MAINTENANCE.

PERSONAL AUTHOR: HOYE, WALTER W.

DESCRIPTOR: *CASE STUDIES; COSTS; *COST EFFECTIVENESS; EQUIPMENT; *MAINTENANCE; MANPOWER UTILIZATION; PIPES; *PREVENTIVE MEASURES; REPAIRS; STANDARDS; UTILITIES; *WATER DISTRIBUTION; *WATER SUPPLY

DESCRIPTIVE NOTE: 501-505P.

ABSTRACT: THIS ARTICLE CONCLUDES THAT UTILITIES CAN INAUGURATE COMMON SENSE COST-CUTTING MEASURES TO ACHIEVE SIGNIFICANT SAVINGS. BASIC PREVENTION MEASURES, A FIELD STUDY, AND STANDARDS AND EQUIPMENT PROGRAMS HAVE HELPED TO MINIMIZE PIPE FAILURE AND REPAIR COSTS THROUGHOUT THE LOS ANGELES DEPARTMENT WATER AND POWER SYSTEM.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL, V72 N9

IRIS ACCESSION NUMBER: EW005479

PUBLICATION DATE: SEP 80

TITLE: FORECASTING WATER DEMAND IN THE PACIFIC NORTHWEST.

PERSONAL AUTHOR: BROWNE, DAVID W.; AND OTHERS

DESCRIPTOR: COMMERCIAL WATER USE; DOMESTIC WATER USE; FORECASTING; INDUSTRIAL WATER USE; MANAGEMENT; *PACIFIC NORTHWEST; *PLANNING; *TREND ANALYSIS; *WATER CONSUMPTION; *WATER DEMAND; WATER USE

DESCRIPTIVE NOTE: 506-507P.

ABSTRACT: THE CONVENTIONAL APPROACH TO FORECASTING FUTURE PER CAPITA WATER CONSUMPTION-- EXTRAPOLATING THE TREND OF INCREASING CONSUMPTION WHICH HAS PREVAILED OVER THE PAST 30 YEARS--- WILL HAVE TO BE REEVALUATED IN VIEW OF AN APPARENT LEVELING OFF OF DEMAND IN THE PACIFIC NORTHWEST. THE FACTORS AFFECTING THIS LEVELING TREND SUGGEST THAT THE TREND WILL CONTINUE, AND THAT GENERALLY IN AN AREA IN WHICH NO ONE CLASS OF USERS TENDS TO DOMINATE, PER CAPITA USAGE WILL CONCEIVABLY BE DECREASING IN THE NEAR FUTURE.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL, V72 N9

IRIS ACCESSION NUMBER: EW005480

PUBLICATION DATE: SEP 80

TITLE: COMPUTER MODELING PROGRAMS: TOOLS FOR MODEL OPERATIONS.

PERSONAL AUTHOR: CESARIO, A. LEE

DESCRIPTOR: *COMPUTER APPLICATIONS; *COMPUTER MODELING; *COMPUTER PROGRAMS; *DATA ANALYSIS; *COLORADO; FACILITIES; *MANAGEMENT; MATHEMATICAL MODELING; OPERATIONS (WATER); *PLANNING; *WATER DISTRIBUTION; *WATER TREATMENT

DESCRIPTIVE NOTE: 508-513P.

ABSTRACT: COMPUTER MODELING OF DISTRIBUTION SYSTEMS HAS COME OF AGE AS A TOOL FOR ENGINEERS AND PLANNERS. A GROUP OF PROGRAMS THAT EXTRACT AND COMBINE NETWORKS AND ALLOCATE LOADS ARE VITAL TO AN EFFICIENT, COST-EFFECTIVE OPERATION. THE DENVER WATER DEPARTMENT SUCCESSFULLY DEVELOPED AND APPLIED SUCH A SYSTEM FOR COMPUTER MODELING TO ACHIEVE ACCURATE DATA PROCESSING ALONG WITH ITS INHERENT REWARDS OF ECONOMY AND EFFICIENCY. A DETAILED TRACING OF THE PROGRAM'S CONSTRUCTION AND SUBSEQUENT MODIFICATIONS IS PRESENTED AS AN EXAMPLE OF HOW TO USE COMPUTER PROGRAMS TO ELIMINATE REVENUE LOSSES RESULTING FROM INADEQUATE SYSTEM OPERATION.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL, V72 N9

IRIS ACCESSION NUMBER: EW005481

PUBLICATION DATE: SEP 80

TITLE: INITIAL DEGRADATION OF EFFLUENT QUALITY DURING FILTRATION.

PERSONAL AUTHOR: AMIRTHARAJAH, A.; WETSTEIN, DANIEL P.

DESCRIPTOR: *EFFLUENT QUALITY; *FILTERS; *FILTRATION; *GRANULAR MEDIA FILTERS; MATHEMATICAL MODELING; *OPERATIONS (WATER); *WATER TREATMENT; WATER QUALITY

DESCRIPTIVE NOTE: 518-524P.

ABSTRACT: ALTHOUGH THE INITIAL DEGRADATION OF EFFLUENT QUALITY FROM A GRANULAR MEDIA FILTER HAS IMPORTANT IMPLICATIONS FOR THE DESIGN AND OPERATION OF FILTERS NEEDED TO PRODUCE EXTREMELY HIGH QUALITY WATER, THIS PROBLEM HAS NOT PREVIOUSLY BEEN INVESTIGATED IN DEPTH. THE MECHANISM RESPONSIBLE FOR THE POOR EFFLUENT APPEARS TO INVOLVE AN INTERACTION BETWEEN THE BACKWASH STAGE AND THE INITIAL STAGES OF FILTRATION, DURING WHICH A DEGRADATIVE PHASE IS FOLLOWED BY AN IMPROVING PHASE.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL, V72 N9

IRIS ACCESSION NUMBER: EW005482

PUBLICATION DATE: SEP 80

TITLE: THE BED DEPTH SERVICE TIME DESIGN METHOD FOR DEEP BED FILTRATION.

PERSONAL AUTHOR: SAATCI, AHMET M. AND OULMAN, C. S.

DESCRIPTOR: *BED DEPTH SERVICE TIME; DEEP BED FILTERS; EFFLUENTS; *EQUIPMENT; *FILTER DESIGN; *FILTERS; FLOW RATES; MATHEMATICAL MODELING; *OPERATIONS (WATER); *WATER TREATMENT; WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 524-528P.

ABSTRACT: THE BED DEPTH SERVICE TIME (BDST) METHOD, A SIMPLE MEANS FOR EVALUATING THE COEFFICIENTS NEEDED IN FILTER DESIGN, CAN PROVIDE A RATIONAL BASIS FOR THE DESIGN OF A DEEP BED FILTER. ONCE DETERMINED, THESE COEFFICIENTS, ALONG WITH THE ESTIMATES OF HEAD LOSS, CAN BE USED TO EVALUATE THE EFFECTS OF FLOW RATE, FILTER LENGTH, AND INFLUENT CONCENTRATION AND EFFLUENT SUSPENDED SOLIDS CONCENTRATION ON THE LENGTH OF THE FILTER RUN. THE COEFFICIENTS CAN BE DETERMINED IN PILOT PLANT TESTS USING FILTERS OF VARIOUS LENGTHS OR, WITH A SOMEWHAT LOWER ACCURACY, FROM THE PERFORMANCE OF A SINGLE EXISTING FILTER.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL, V72 N9

IRIS ACCESSION NUMBER: EW005483
PUBLICATION DATE: SEP 80

TITLE: THE USE OF A PERFORATED BAFFLE AT THE INLET OF RECTANGULAR SETTLING BASINS.

PERSONAL AUTHOR: BERNARDO, LUIZ DI; GIORGETTI, MARCIUS F.

DESCRIPTOR: *BAFFLES; DESIGN; *DISCHARGE JETS; *EQUIPMENT; FACILITIES; FLOCCULATION; *WATER TREATMENT; WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 528-533P.

ABSTRACT: THE METHODS COMMONLY USED TO DESIGN A PERFORATED BAFFLE AT THE INLET OF RECTANGULAR SETTLING BASINS ARE STILL BEING REFINED. RECENTLY THIS PILOT PLANT STUDY WAS CONDUCTED TO DETERMINE THE OPTIMUM DISTANCE REQUIRED FOR INTERMIXING TO OCCUR BETWEEN THE JETS OF NEIGHBORING PORTS AND THE EFFECT OF REYNOLD'S NUMBER ON THAT DISTANCE. THE USE OF SMALL NOZZLES IN PLACE OF CIRCULAR ORIFICE WAS ALSO EXPLORED. THE PRELIMINARY RESULTS AWAIT FURTHER CONFIRMATION WITH FLOCCULATED WATER IN PLACE OF THE COLORED TAP WATER USED IN THIS WORK.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL, V72 N9

IRIS ACCESSION NUMBER: EW005484

PUBLICATION DATE: SEP 80

TITLE: TASTE AS AN INDICATOR FOR DRINKING WATER QUALITY.

PERSONAL AUTHOR: ZOETEMAN, B. C. J.; AND OTHERS

DESCRIPTOR: CHEMICAL ANALYSIS; *CONSUMER PERCEPTIONS; DRINKING WATER; HEALTH RISKS; MEASUREMENT TECHNIQUES; *ODOR; ORGANIC COMPOUNDS; SENSORY ASSESSMENT; *STANDARDS; *TASTE; *WATER TREATMENT; WATER QUALITY

DESCRIPTIVE NOTE: 537-540P.

ABSTRACT: MANY CHEMICAL CONSTITUENTS OF DRINKING WATER ARE MEASURED REGULARLY IN WATER UTILITY LABORATORIES, BUT ONLY RARELY IS ATTENTION GIVEN TO TASTE AND ODOR. THE CONSUMER, HOWEVER, STILL RELIES TO A LARGE EXTENT ON SENSORY WATER QUALITY ASSESSMENT. RECENT STUDIES IN THE NETHERLANDS SUGGESTS THAT THE APPLICATION THROUGH TASTE ASSESSMENT OF THE TRADITIONAL PRINCIPLE THAT DRINKING WATER SHOULD BE TASTELESS, ODORLESS, COLORLESS, AND TRANSPARENT CAN CONTRIBUTE SIGNIFICANTLY TO BETTER QUALITY DRINKING WATER AND REDUCE HEALTH RISKS TO THE CONSUMER.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL, V72 N9

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*BIOLOGICAL FILTERS (1) EW005027
*BIOLOGICAL OXYGEN DEMAND (1) EW005285
BIOLOGICAL PHOSPHROUS REMOVAL (1) EW005267
BIOLOGICAL PROCESSES (2) EW005108 EW005110
*BIOLOGICAL SCIENCES (2) EW004513 EW005464
*BIOLOGICAL TREATMENT (7) EW004053 EW004557 EW004753 EW005059 EW005064 EW005070 EW005126
BIOLOGICAL TREATMENT (2) EW005005 EW005111
*BIOLOGY (2) EW004954 EW005275
BIOLOGY (2) EW004597 EW004738
*BIOSPHERE (1) EW004936
*BLACKWATER (1) EW004528
BLUEGILL (1) EW004650
BOILERS (1) EW005111
*BOTTOM SEDIMENTS (1) EW004649
*BROMINATION (1) EW005313
*BUDGETING (1) EW004914
*BUDGETS (1) EW004732
*BUILDINGS (1) EW004999
BULK SEDIMENTS (1) EW004649
*BURIED PIPELINES (1) EW004855
*CADMIUM (1) EW005134
CALCIUM HYDROXIDE (1) EW004850

*CALCULATION	(1)	EW005176
*CALCULATIONS	(2)	EW005175 EW005177
*CALCULATOR PROGRAMS	(1)	EW005176
*CALIFORNIA	(6)	EW004705 EW004864 EW005000 EW005010 EW005046 EW005158
CALIFORNIA	(3)	EW005062 EW005063 EW005065
*CANADA	(1)	EW005060
CANADA	(1)	EW005058
CANALS	(1)	EW005470
*CANCER	(2)	EW004570 EW004924
CANCER	(1)	EW004920
*CARBON	(1)	EW004569
*CARBON ABSORPTION	(2)	EW004405 EW004754
CARBON ABSORPTION	(1)	EW005168
*CARBONACEOUS WASTEWATER	(1)	EW005320
*CARBON-13	(1)	EW004934
CARCINOGENICITY	(5)	EW004624 EW004625 EW004626 EW004630 EW004634
*CARCINOGENS	(3)	EW003809 EW004570 EW005057
CARCINOGENS	(6)	EW004628 EW004633 EW004675 EW004679 EW004936 EW005151
CARDIOVASCULAR SYSTEM	(1)	EW004920
CAREER LADDERS	(1)	EW004932
*CARRYING CAPACITY	(1)	EW005177
*CASE HISTORIES	(1)	EW005181
*CASE STUDIES	(14)	EW004678 EW004679 EW004686 EW004687 EW004688 EW004874 EW005047 EW005060 EW005063 EW005068 EW005158 EW005183 EW005184 EW005478
CASE STUDIES	(12)	EW004707 EW004847 EW004853 EW004991 EW004994 EW005037 EW005038 EW005039 EW005040 EW005041 EW005266 EW005267
CAST-IRON PIPES	(1)	EW004047
*CATCH BASINS	(1)	EW004992
CATHODIC PROTECTION	(1)	EW005000
CATIONS	(1)	EW003694
CELL BIOLOGY	(1)	EW005069
*CENTRIFUGAL PUMPS	(2)	EW004915 EW005259
*CESSPOOLS	(1)	EW004707

*CHAINS (1) EW005266
*CHANNEL FLOWS (1) EW005175
*CHEMICAL ANALYSIS (12) EW004649 EW004722 EW004920 EW004925 EW004934 EW005034 EW005036
EW005123 EW005313 EW005319 EW005466 EW005469
CHEMICAL ANALYSIS (14) EW003560 EW004051 EW004374 EW004569 EW004660 EW004679 EW004707
EW004758 EW004922 EW004942 EW005271 EW005467 EW005468 EW005484
CHEMICAL COMPOSITION (1) EW004649
CHEMICAL CONTAMINANTS (1) EW005091
*CHEMICAL HAZARDS (1) EW004854
*CHEMICAL IDENTIFICATION (1) EW005149
*CHEMICAL INDUSTRY (3) EW004568 EW005287 EW005468
CHEMICAL INDUSTRY (1) EW005068
*CHEMICAL INFORMATION RESOURCES (1) EW005149
*CHEMICAL OXIDATION TECHNIQUE (1) EW004681
*CHEMICAL OXYGEN DEMAND (1) EW005285
CHEMICAL OXYGEN DEMAND (2) EW004917 EW005166
*CHEMICAL PROCESSES (2) EW005127 EW005265
CHEMICAL PROPERTIES (1) EW004586
*CHEMICAL REACTIONS (11) EW004737 EW004754 EW004869 EW004922 EW004923 EW004985 EW005000
EW005004 EW005099 EW005108 EW005170
CHEMICAL REACTIONS (6) EW004374 EW004924 EW004925 EW005034 EW005036 EW005474
CHEMICAL REACTIVITY (1) EW004586
*CHEMICALS (8) EW003560 EW003809 EW004586 EW004660 EW004674 EW005034 EW005143
EW005468
CHEMICALS (2) EW004988 EW005057
*CHEMICAL SAFETY (1) EW005287
*CHEMICAL SPILLS (1) EW004586
CHEMICAL STORAGE (1) EW005287
*CHEMICAL SUBSTANCES INFORMATION NETWORK (1) EW005149
CHEMICAL TRANSPORT (1) EW005287
*CHEMICAL TREATMENT (2) EW004848 EW005170
CHEMICAL TREATMENT (1) EW005028
*CHEMISTRY (28) EW003809 EW004374 EW004558 EW004649 EW004660 EW004737 EW004933
EW004934 EW004935 EW004937 EW004938 EW004939 EW004940 EW004984 EW005122
EW005123 EW005125 EW005126 EW005127 EW005149 EW005170 EW005265 EW005268
EW005281 EW005465 EW005467 EW005468 EW005469

CHEMISTRY (15) EW003560 EW004405 EW004586 EW004597 EW004600 EW004625 EW004626
EW004630 EW004632 EW004633 EW004634 EW004936 EW005048 EW005197 EW005466

CHEMISTS (1) EW004932

CHLORAMINES (1) EW004558

*CHLORIDES (1) EW005088

*CHLORINATED PHENOLS (1) EW004631

*CHLORINATION (6) EW004360 EW004675 EW004943 EW005017 EW005069 EW005197

CHLORINATION (4) EW004640 EW004991 EW005171 EW005265

*CHLORINE (5) EW004924 EW005173 EW005174 EW005308 EW005313

CHLORINE (5) EW004558 EW004841 EW004850 EW005069 EW005197

*CHLORINE DIOXIDE (4) EW004558 EW004924 EW004987 EW005308

*CHLORINE WITHDRAWAL (1) EW005174

*CHROMATOGRAPHY (3) EW004933 EW004939 EW004942

CHROMATOGRAPHY (1) EW005095

*CITIZENSHIP EDUCATION (1) EW004863

CIVIL ENGINEERING (3) EW004998 EW005008 EW005024

*CLARIFICATION (1) EW003235

CLARIFICATION (1) EW005026

*CLARIFIERS (1) EW005156

*CLEAN AIR ACT (1) EW005284

CLEAN AIR ACT (1) EW005283

CLEANING (1) EW005183

*CLEANUP TECHNIQUES (2) EW005115 EW005116

CLEAN WATER ACT (1) EW005042

CLIMATIC FACTORS (1) EW005462

*CLOSED LOOP CONTROL (1) EW004759

COAGULANTS (2) EW005004 EW005047

*COAGULATION (2) EW004707 EW005198

COAGULATION (5) EW004043 EW004956 EW005028 EW005048 EW005185

*COAL CONVERSION PLANTS (1) EW005144

*COASTAL POLLUTION (2) EW005115 EW005116

*COLIFORM BACTERIA (3) EW004638 EW005069 EW005079

COLIFORM BACTERIA (3) EW005071 EW005096 EW005097

*COLIFORM DETERMINATION (1) EW005066
*COLLECTION SYSTEMS (1) EW004052
COLLECTION SYSTEMS (1) EW004746
COLLECTIVE BARGAINING (1) EW005052
*COLLEGES (1) EW004576
*COLLEGE SCIENCE (1) EW005281
COLLOIDAL FOULING (1) EW005185
COLOR (1) EW005014
*COLORADO (2) EW004688 EW005480
COLORADO (2) EW005049 EW005192
COLORIMETER (1) EW004682
*COMBUSTION PROCESSES (1) EW004958
COMMERCIAL WATER USE (1) EW005479
*COMMUNICATION PROBLEMS (1) EW004983
*COMMUNICATIONS (1) EW004983
COMMUNICATION SKILLS (1) EW005052
*COMMUNITY DEVELOPMENT (1) EW004986
COMMUNITY PLANNING (1) EW004914
COMPARATIVE ANALYSIS (1) EW004557
*COMPOSTING (2) EW004712 EW004792
COMPOSTING (1) EW004990
*COMPUTER APPLICATIONS (3) EW004688 EW004689 EW005480
*COMPUTER MODELING (1) EW005480
*COMPUTER MODELS (2) EW004711 EW004856
*COMPUTER PROGRAMS (4) EW004721 EW004856 EW004860 EW005480
COMPUTER PROGRAMS (1) EW004738
*COMPUTERS (4) EW004758 EW004856 EW004861 EW004981
COMPUTERS (1) EW005161
CONCRETE PIPES (1) EW004047
*CONCRETE TANKS (2) EW004685 EW004706
CONDUCTIVITY METER (1) EW004682
CONDUITS (1) EW005177

*CONFERENCE REPORTS (2) EW004639 EW004945
CONFIDENCE INTERVALS (1) EW004937
CONNECTICUT (1) EW005183
*CONSERVATION (5) EW004590 EW004705 EW004709 EW004918 EW005049
CONSERVATION (1) EW005462
*CONSERVATION (ENVIRONMENT) (2) EW005006 EW005163
*CONSTRUCTION (10) EW004593 EW004708 EW004966 EW004971 EW004999 EW005007 EW005024 EW005050 EW005084 EW005160
CONSTRUCTION (12) EW004362 EW004370 EW004594 EW004595 EW004640 EW004653 EW004919 EW004959 EW004988 EW004996 EW005054 EW005462
*CONSTRUCTION (PROCESS) (2) EW004706 EW005021
*CONSULTANTS (1) EW004980
*CONSUMER PERCEPTIONS (2) EW004705 EW005484
*CONSUMPTION (1) EW004856
CONSUMPTION PATTERNS (1) EW005194
CONTAMINANTS (1) EW005195
*CONTAMINATION (1) EW004679

CONTRACTS (1) EW005013
*CONTROL DEVICES (1) EW004684
CONTROLLERS (1) EW005270
CONTROL TECHNOLOGIES (1) EW005129
COOLING WATER (1) EW005111
*COOPERATIVE PLANNING (1) EW004687
*COPPER (1) EW004635
COPPER SULFATE (1) EW004991
CORE WALLS (1) EW004706
*CORROSION (7) EW004714 EW004715 EW004920 EW004922 EW004923 EW004925 EW005178
CORROSION (3) EW003804 EW004717 EW005158
*CORROSION CONTROL (2) EW005000 EW005178
*COST (1) EW005058
*COST ANALYSIS (1) EW004859
*COST BENEFIT ANALYSIS (2) EW004990 EW005182

COST BENEFIT ANALYSIS (2) EW005196 EW005270
COST CURVES (1) EW005168

*COST EFFECTIVENESS (19) EW004681 EW004686 EW004914 EW004919 EW004990 EW004994 EW005005 EW005145 EW005155 EW005156 EW005160 EW005161 EW005164 EW005180 EW005264 EW005270 EW005318 EW005320 EW005478

COST EFFECTIVENESS (16) EW004557 EW004678 EW004861 EW004921 EW004992 EW005004 EW005047 EW005050 EW005088 EW005141 EW005167 EW005182 EW005265 EW005266 EW005269 EW005321

*COSTS (14) EW004593 EW004594 EW004596 EW004921 EW004922 EW004982 EW005000 EW005011 EW005013 EW005043 EW005056 EW005162 EW005168 EW005195

COSTS (9) EW004653 EW004681 EW004923 EW004989 EW005044 EW005312 EW005470 EW005472 EW005478

*COST STUDIES (1) EW004561

COURSE DESCRIPTIONS (1) EW005281

*COVER COATS (1) EW004685

*CROSS CONNECTIONS (1) EW004364

CURVE FITTING (1) EW004937

*CYANIDE (1) EW004872

CYANIDE (1) EW004957

*CYANIDES (1) EW004630

CYANIDES (2) EW005095 EW005102

CYTOKININ (1) EW005268

DAMS (1) EW005470

DAPHORIA (1) EW004650

*DATA ANALYSIS (2) EW005068 EW005480

DATA ANALYSIS (1) EW005031

*DATA COLLECTION (2) EW004984 EW005031

DATA COLLECTION (1) EW004874

DATA INTERPRETATION (1) EW004738

*DECHLORINATION (1) EW005171

*DECISION MAKING (6) EW004639 EW004841 EW004874 EW005011 EW005116 EW005262

DECISION MAKING (1) EW005115

DEEP BED FILTERS (1) EW005482

*DEMONSTRATION PLANTS (2) EW005111 EW005144

*DEMONSTRATION PROJECTS (1) EW005192

*DENITRIFICATION	(1)	EW005070
DENTAL HEALTH	(1)	EW004956
DENVER WATER DEPARTMENT	(1)	EW005192
DESALINATION	(2)	EW004045 EW004590
*DESIGN	(56)	EW004054 EW004055 EW004362 EW004370 EW004415 EW004640 EW004653 EW004687 EW004690 EW004704 EW004706 EW004708 EW004710 EW004753 EW004843 EW004847 EW004851 EW004852 EW004855 EW004867 EW004868 EW004873 EW004980 EW004989 EW004995 EW004996 EW004998 EW005002 EW005006 EW005012 EW005021 EW005024 EW005025 EW005040 EW005051 EW005053 EW005055 EW005058 EW005062 EW005092 EW005111 EW005122 EW005144 EW005172 EW005173 EW005177 EW005184 EW005269 EW005311 EW005315 EW005316 EW005320 EW005321 EW005462 EW005470 EW005472
DESIGN	(39)	EW004043 EW004044 EW004049 EW004050 EW004552 EW004557 EW004585 EW004588 EW004684 EW004686 EW004848 EW004880 EW004919 EW004921 EW004949 EW004958 EW004959 EW004981 EW004988 EW004990 EW005018 EW005020 EW005026 EW005027 EW005029 EW005044 EW005059 EW005061 EW005063 EW005065 EW005067 EW005094 EW005099 EW005100 EW005160 EW005162 EW005167 EW005318 EW005483
*DESIGN CRITERIA	(1)	EW004853
*DESIGN NEEDS	(2)	EW004708 EW005047
DESIGN NEEDS	(1)	EW005195
DESIGN PROBLEMS	(1)	EW004706
*DESIGN REQUIREMENTS	(1)	EW004983
*DETENTION BASINS	(1)	EW004746
*DETOXIFICATION	(2)	EW004675 EW005310
*DEVELOPING NATIONS	(1)	EW005159
*DEWATERING	(2)	EW003235 EW005183
DEWATERING	(4)	EW005029 EW005264 EW005309 EW005317
DIELDRIN	(1)	EW004609
*DIESEL ENGINES	(1)	EW005019
*DIFFUSERS	(1)	EW004690
*DIFFUSION	(1)	EW004858
DIFFUSION	(1)	EW004860
*DIGESTERS	(1)	EW004678
*DIGESTORS	(1)	EW005183
*DIGITAL COMPUTERS	(1)	EW004688
*DIPHENYLHYDRAZINE	(1)	EW004628

*DIRECT FILTRATION	(1)	EW005047
*DISCHARGE JETS	(1)	EW005483
*DISEASE	(1)	EW005314
DISEASE	(2)	EW004469 EW004892
DISEASES	(2)	EW004470 EW004471
*DISINFECTANTS	(1)	EW005308
*DISINFECTION	(18)	EW003235 EW004046 EW004056 EW004558 EW004638 EW004681 EW004841 EW004850 EW004924 EW004943 EW005017 EW005030 EW005058 EW005071 EW005171 EW005172 EW005173 EW005308
DISINFECTION	(2)	EW005069 EW005265
*DISSOLVED AIR FLOTATION	(1)	EW005051
DISSOLVED GASES	(1)	EW003694
DISSOLVED OXYGEN	(1)	EW004957
*DISSOLVED SOLIDS	(1)	EW005088
DISTRIBUTION PARAMETERS	(1)	EW004937
*DISTRIBUTION SYSTEMS	(2)	EW004981 EW005000
DOMESTIC WATER USE	(1)	EW005479
*DRAINAGE	(4)	EW004861 EW004945 EW004969 EW005012
DRAINAGE	(1)	EW004867
*DRAINAGE BASINS	(1)	EW004864
*DRINKING WATER	(33)	EW004043 EW004044 EW004045 EW004046 EW004047 EW004048 EW004049 EW004050 EW004051 EW004536 EW004638 EW004658 EW004675 EW004848 EW004852 EW004854 EW004919 EW004920 EW004923 EW004924 EW004955 EW004956 EW004973 EW004993 EW005017 EW005034 EW005038 EW005048 EW005054 EW005192 EW005195 EW005196 EW005197
DRINKING WATER	(5)	EW004558 EW004842 EW005039 EW005199 EW005484
*DROUGHT	(3)	EW004705 EW004918 EW005044
DUST	(1)	EW004555
DYNAMIC PROGRAMMING	(1)	EW005470
*EARTHQUAKES	(1)	EW004855
EARTH SCIENCE	(1)	EW004414
ECOLOGICAL EFFECTS	(1)	EW004941
*ECOLOGY	(3)	EW004660 EW004738 EW004954
ECOLOGY	(3)	EW004568 EW004941 EW005084
*ECONOMIC ANALYSIS	(3)	EW004645 EW005168 EW005470

*ECONOMIC FACTORS	(2)	EW005193 EW005280
ECONOMIC FACTORS	(6)	EW004528 EW005044 EW005164 EW005195 EW005198 EW005477
*ECONOMIC MODELS	(1)	EW005010
*ECONOMICS	(14)	EW004593 EW004594 EW004712 EW004713 EW004718 EW004732 EW004757 EW004861 EW004880 EW004898 EW005010 EW005040 EW005088 EW005193
ECONOMICS	(18)	EW004584 EW004596 EW004636 EW004709 EW004756 EW004792 EW004853 EW004919 EW004945 EW004959 EW004980 EW005013 EW005092 EW005094 EW005101 EW005109 EW005315 EW005463
*ECOSYSTEMS	(1)	EW004660
ECOSYSTEMS	(1)	EW004639
*EFFICIENCY	(1)	EW005311
EFFICIENCY	(2)	EW004596 EW004751
EFFLUENT	(1)	EW004752
EFFLUENT QUALITIY	(1)	EW005171
*EFFLUENT QUALITY	(3)	EW005145 EW005199 EW005481
*EFFLUENTS	(13)	EW003560 EW004056 EW004557 EW004585 EW004588 EW004640 EW005049 EW005071 EW005097 EW005105 EW005123 EW005145 EW005321
EFFLUENTS	(20)	EW004552 EW004653 EW004681 EW004690 EW004777 EW004849 EW004947 EW005096 EW005122 EW005124 EW005125 EW005126 EW005127 EW005140 EW005166 EW005170 EW005311 EW005312 EW005315 EW005482
*ELECTRICAL GROUNDING	(2)	EW004714 EW004715
*ELECTRICAL SYSTEMS	(1)	EW005025
ELECTRICAL SYSTEMS	(1)	EW005003
*ELECTRIC CIRCUITS	(2)	EW004714 EW004715
*ELECTRIC MOTORS	(1)	EW005019
ELECTRIC MOTORS	(1)	EW005162
ELECTRO ANALYTICAL CHEMISTRY	(1)	EW004933
*ELECTRODES	(1)	EW005155
ELECTROLYTIC CONDUCTIVITY	(1)	EW003694
*ELECTRONIC EQUIPMENT	(1)	EW004983
*ELUTRIATE TESTING	(1)	EW004649
*EMERGENCY PLANNING	(1)	EW004854
EMISSIONS	(1)	EW005129
*EMPLOYEE ABSENTEEISM	(1)	EW004951

*EMPLOYEE MORALE (1) EW004951
*EMPLOYEES (1) EW004950

*EMPLOYER EMPLOYEE RELATIONS (1) EW005052

*ENERGY (9) EW004757 EW004871 EW004880 EW004936 EW005093 EW005160 EW005161 EW005162 EW005169

ENERGY (4) EW004660 EW004843 EW004851 EW005167

*ENERGY CONSERVATION (8) EW004843 EW004871 EW005011 EW005156 EW005169 EW005264 EW005267 EW005462

ENERGY CONSERVATION (4) EW004981 EW005165 EW005180 EW005265

*ENERGY REQUIREMENTS (2) EW004880 EW005065

ENERGY SOURCES (1) EW004936

ENERGY USE (1) EW004990

ENFORCEMENT PROGRAM (1) EW005307

*ENGINEERING (9) EW004405 EW004415 EW004584 EW004711 EW004980 EW005000 EW005007 EW005013 EW005021

ENGINEERING (12) EW004360 EW004370 EW004636 EW004710 EW004721 EW004855 EW004860 EW004995 EW005159 EW005160 EW005161 EW005162

ENGINEERING DESIGN (1) EW005181

ENGINEERING TECHNOLOGY (1) EW005046

*ENGINEERS (1) EW004932

*ENVIRONMENT (15) EW004470 EW004513 EW004568 EW004570 EW004660 EW004712 EW004738 EW004945 EW005033 EW005084 EW005151 EW005262 EW005275 EW005276 EW005475

ENVIRONMENT (4) EW004609 EW004954 EW005006 EW005281

ENVIRONMENTAL CONTAMINATORS (1) EW005129

*ENVIRONMENTAL CONTROL (1) EW005286

*ENVIRONMENTAL CRITERIA (1) EW005084

*ENVIRONMENTAL EDUCATION (1) EW005281

*ENVIRONMENTAL EFFECTS (11) EW004841 EW005131 EW005132 EW005134 EW005135 EW005136 EW005137 EW005138 EW005139 EW005141 EW005142

ENVIRONMENTAL EFFECTS (1) EW005084

*ENVIRONMENTAL FACTORS (1) EW005033

ENVIRONMENTAL HEALTH (1) EW005165

*ENVIRONMENTAL IMPACT (1) EW005321

ENVIRONMENTAL IMPACT (2) EW005091 EW005101

*ENVIRONMENTAL INFLUENCES (2) EW004660 EW005124
ENVIRONMENTAL INFLUENCES (3) EW005163 EW005262 EW005271

ENVIRONMENTAL LAW (1) EW004370

ENVIRONMENTAL POLLUTION (1) EW005091

*ENVIRONMENTAL PROBLEMS (1) EW004936

*ENVIRONMENTAL PROTECTION AGENCY (4) EW004859 EW005033 EW005262 EW005307

ENVIRONMENTAL PROTECTION AGENCY (2) EW005195 EW005284

*ENVIRONMENTAL QUALITY (1) EW005283

ENVIRONMENTAL QUALITY (2) EW005038 EW005284

*ENVIRONMENTAL REGULATIONS (1) EW005195

ENVIRONMENTAL REGULATIONS (2) EW005048 EW005196

*ENVIRONMENTAL RESEARCH (3) EW004660 EW005467 EW005469

ENVIRONMENTAL STANDARDS (2) EW005195 EW005467

ENVIRONMENTAL TECHNICIANS (1) EW005467

ENZYMES (1) EW005002

*EPIDEMIOLOGICAL STUDIES (1) EW004924

*EPIDEMIOLOGY (1) EW004570

*EQUIPMENT (49) EW004043 EW004044 EW004045 EW004046 EW004047 EW004048 EW004049
EW004051 EW004052 EW004054 EW004055 EW004057 EW004058 EW004360 EW004370
EW004415 EW004640 EW004658 EW004682 EW004683 EW004684 EW004685 EW004686
EW004704 EW004792 EW004847 EW004915 EW004980 EW005026 EW005027 EW005029
EW005041 EW005060 EW005061 EW005112 EW005154 EW005155 EW005156 EW005157
EW005158 EW005173 EW005174 EW005179 EW005259 EW005266 EW005270 EW005476
EW005482 EW005483

EQUIPMENT (21) EW004050 EW004053 EW004056 EW004364 EW004688 EW004689 EW004947
EW004989 EW005019 EW005023 EW005025 EW005028 EW005031 EW005055 EW005180
EW005181 EW005264 EW005265 EW005269 EW005320 EW005478

*EQUIPMENT EVALUATION (8) EW004643 EW004658 EW004682 EW004686 EW004689 EW005185 EW005266
EW005270

EQUIPMENT EVALUATION (1) EW004708

EQUIPMENT FAILURE (1) EW004852

EQUIPMENT INSTALLATION (1) EW004364

*EQUIPMENT MAINTENANCE (1) EW004915

EQUIPMENT MAINTENANCE (1) EW005023

EQUIPMENT MANUFACTURERS (1) EW004689

*EQUIPMENT PROTECTION (1) EW005178

*EQUIPMENT REVIEW (1) EW004684

EQUIPMENT STANDARDS	(1)	EW004689
EQUIPMENT TESTING	(1)	EW004364
EQUIPMENT UTILIZATION	(1)	EW004658
*EQUIVALENT BIOCHEMICAL OXYGEN DEMAND	(1)	EW004758
*EROSION	(1)	EW004645
EROSION	(2)	EW004967 EW004969
*EROSION CONTROL	(1)	EW004971
ERRORS	(1)	EW004937
*ESTUARIES	(1)	EW004941
EUROPE	(1)	EW004636
*EUTROPHICATION	(1)	EW005138
EUTROPHICATION	(1)	EW005463
*EVALUATION	(4)	EW004710 EW005059 EW005109 EW005145
EVALUATION	(2)	EW004874 EW005144
EVALUATION METHODS	(1)	EW005164
EXCAVATION	(1)	EW005084
*EXPERIMENTAL PROGRAMS	(3)	EW004922 EW004923 EW005312
EXPERIMENTS	(1)	EW004850
EXPLOSIVE GASES	(1)	EW005003
*EXTENDED AERATION PLANTS	(1)	EW004947
*FACILITIES	(57)	EW004360 EW004370 EW004415 EW004501 EW004593 EW004640 EW004643 EW004686 EW004687 EW004704 EW004709 EW004711 EW004752 EW004792 EW004843 EW004847 EW004852 EW004867 EW004869 EW004880 EW004898 EW004919 EW004947 EW004988 EW004989 EW004996 EW005007 EW005026 EW005027 EW005028 EW005029 EW005043 EW005056 EW005059 EW005060 EW005063 EW005065 EW005068 EW005094 EW005112 EW005122 EW005144 EW005145 EW005155 EW005157 EW005159 EW005180 EW005181 EW005183 EW005184 EW005264 EW005269 EW005270 EW005311 EW005315 EW005473 EW005476
FACILITIES	(14)	EW004044 EW004052 EW004707 EW004916 EW004993 EW005013 EW005058 EW005178 EW005309 EW005319 EW005320 EW005321 EW005480 EW005483
*FARMING	(1)	EW004683
FEASIBILITY STUDIES	(1)	EW005047
FEDERAL AGENCIES	(1)	EW004576
FEDERAL ASSISTANCE PROGRAMS	(1)	EW004590
*FEDERAL GOVERNMENT	(2)	EW005164 EW005283

FEDERAL GOVERNMENT (2) EW005163 EW005284
FEDERAL LAW (1) EW004732
*FEDERAL LEGISLATION (7) EW004536 EW004568 EW004677 EW004973 EW005035 EW005284 EW005307
*FEDERAL LEGISTATION (1) EW005283
*FEDERAL PROGRAMS (3) EW004973 EW005163 EW005307
FEDERAL PROGRAMS (2) EW004536 EW005164
*FEDERAL REGULATION (3) EW004973 EW005042 EW005262
*FEDERAL REGULATIONS (4) EW004568 EW005033 EW005035 EW005080
FEDERAL REGULATIONS (2) EW004536 EW005079
FEDERAL ROLE (1) EW005262
*FEDERAL STATE RELATIONSHIP (1) EW005033
FEDERAL STATE RELATIONSHIP (1) EW004973
FEDERAL STATE RELATIONSHIPS (1) EW005475
*FEDERAL WATER POLLUTION CONTROL ACT (1) EW004973
FEDERAL WATER POLLUTION CONTROL ACT (1) EW004674
FERRITES (1) EW005061
*FERTILIZERS (1) EW005276
FIBERS (1) EW005109
FIELD SAMPLING (1) EW004649
FIELD STUDIES (2) EW004941 EW004985
FIELD SURVEYS (1) EW004555
*FIELD TEST (1) EW004717
FIELD TESTS (2) EW004722 EW004858
*FILTER DESIGN (1) EW005482
*FILTERS (4) EW004704 EW005185 EW005481 EW005482
FILTERS (2) EW004653 EW005110
*FILTRATION (9) EW004044 EW004464 EW004675 EW004704 EW004995 EW005015 EW005109
EW005110 EW005481
FILTRATION (7) EW004598 EW004917 EW005028 EW005047 EW005167 EW005185 EW005473
*FINANCES (2) EW004463 EW004732
FINANCES (1) EW004989
FINANCIAL PLANNING (1) EW005477
*FINANCING (1) EW004916

*FINGERNAIL CLAMS	(1)	EW004957
*FIRE	(1)	EW003809
FIRE HYDRANTS	(1)	EW005020
*FIRST AID	(1)	EW004586
FISH	(1)	EW004650
*FLOCCULATION	(2)	EW004464 EW004719
FLOCCULATION	(7)	EW004598 EW004691 EW004956 EW005026 EW005110 EW005473 EW005483
*FLOCS	(1)	EW004691
*FLOOD CONTROL	(3)	EW004998 EW005007 EW005012
FLOOD CONTROL	(1)	EW004746
*FLOOD PREVENTION	(1)	EW004992
*FLORIDA	(1)	EW004987
FLORIDA	(2)	EW004594 EW005181
FLOTATION	(1)	EW005026
*FLOW MEASUREMENT	(3)	EW004916 EW005055 EW005311
FLOWMETER	(1)	EW004682
*FLOW MONITORING	(1)	EW005182
FLOW RATES	(1)	EW005482
*FLUID FLOW	(6)	EW004415 EW004721 EW005008 EW005175 EW005176 EW005177
*FLUIDIZED BEDS	(1)	EW005005
*FLUID MEASUREMENT	(1)	EW004415
*FLUID MECHANICS	(4)	EW004414 EW004415 EW004721 EW005008
*FLUID SYSTEMS	(1)	EW004414
*FLUORIDE	(1)	EW004956
*FLUORIDE REMOVAL	(1)	EW004956
FLUORIDES	(1)	EW004045
FOOD CHAINS	(1)	EW004941
*FOOD PROCESSING	(2)	EW004752 EW005097
FOOD PROCESSING	(1)	EW005096
FOOD SCIENCE	(1)	EW005105
FOOD TECHNOLOGY	(1)	EW005105
*FORCE MAINS	(1)	EW005158

FORECASTING	(1)	EW005479
FORESTRY	(1)	EW005258
FRICTION	(1)	EW005176
*FRUIT INDUSTRY	(1)	EW005105
FUEL CONSUMPTION	(1)	EW004871
*FUELS	(3)	EW004843 EW004871 EW005093
FUEL SHORTAGES	(1)	EW004851
FUNGICIDES	(1)	EW004973
*FUTURE DEMAND	(1)	EW004590
*GAS CHROMATOGRAPHY	(1)	EW004933
GAS CHROMATOGRAPHY	(2)	EW004942 EW005095
GASES	(1)	EW005095
*GAS RECOVERY	(1)	EW004970
GAS UTILIZATION	(1)	EW004880
GENETICS	(1)	EW004941
*GEORGIA	(1)	EW004981
GEORGIA	(1)	EW004989
*GLOBAL PROBLEMS	(1)	EW005159
GOODNESS-OF-FIT	(1)	EW004937
*GOVERNMENT ROLE	(1)	EW005164
GOVERNMENT ROLE	(2)	EW005163 EW005280
*GRAIN INDUSTRY	(1)	EW005105
GRANTS	(1)	EW005307
*GRANTS PROGRAMS	(1)	EW005042
*GRANULAR ACTIVATED CARBON	(4)	EW004993 EW005167 EW005198 EW005199
*GRANULAR ACTIVATED CARBONS	(1)	EW005195
*GRANULAR CARBON ABSORPTION	(1)	EW005168
*GRANULAR MEDIA FILTER	(1)	EW005185
*GRANULAR MEDIA FILTERS	(1)	EW005481
*GREAT LAKES	(1)	EW004528

*GRIT REMOVAL	(1)	EW005309
GRIT SEPARATION	(1)	EW005309
*GROUND WATER	(4)	EW004598 EW004892 EW004968 EW005062
*GROUNDWATER	(5)	EW004050 EW004536 EW004679 EW004860 EW005046
GROUND WATER	(1)	EW004590
GROUNDWATER	(4)	EW004414 EW005021 EW005045 EW005094
GROUND WATER MOVEMENT	(1)	EW004892
*GROUNDWATER RECHARGE	(2)	EW005045 EW005046
*GUIDELINES	(2)	EW005034 EW005084
GUIDELINES	(2)	EW004362 EW004853
*GUIDES	(4)	EW004469 EW004470 EW005115 EW005116
GUIDES	(2)	EW004374 EW004586
*HALOGENS	(1)	EW005199
HALOGENS	(1)	EW004558
*HALOMETHANES	(1)	EW004626
HANDBOOK	(1)	EW004374
*HANDBOOKS	(2)	EW003809 EW004989
HAND CALCULATORS	(1)	EW005176
*HARBOR FACILITIES	(1)	EW004528
*HAZARDOUS MATERIALS	(5)	EW003809 EW004586 EW004674 EW004854 EW005035
HAZARDOUS MATERIALS	(1)	EW004973
*HAZARDOUS SPILLS	(1)	EW004854
*HAZARDOUS SUBSTANCES	(1)	EW005118
*HAZARDOUS WASTES	(2)	EW004958 EW004959
*HEALTH	(2)	EW004609 EW005075
HEALTH CONSIDERATIONS	(2)	EW004585 EW004588
*HEALTH EDUCATION	(2)	EW004469 EW004470
HEALTH EFFECTS	(14)	EW005045 EW005046 EW005048 EW005131 EW005132 EW005134 EW005135 EW005136 EW005137 EW005138 EW005139 EW005140 EW005141 EW005142
*HEALTH HAZARDS	(1)	EW005314
HEALTH HAZARDS	(2)	EW004471 EW005129
HEALTH RISKS	(2)	EW005045 EW005484
HEAT	(1)	EW004957

*HEATING SYSTEMS	(1)	EW005462
*HEAT RECOVERY	(1)	EW005267
HEAT RECOVERY	(1)	EW005264
HEAT TRANSFER	(2)	EW005264 EW005462
*HEAT TREATMENT	(1)	EW005157
HEAVY-METAL IONS	(1)	EW005061
*HEAVY METALS	(4)	EW004677 EW004680 EW004985 EW005061
HEAVY METALS	(7)	EW004756 EW004936 EW005091 EW005095 EW005102 EW005108 EW005319
*HERBICIDES	(1)	EW004650
*HEXACHLOROBENZENE	(1)	EW005135
*HIGHER EDUCATION	(1)	EW004576
*HIGHWAY SALTING	(1)	EW005038
HISTORY	(1)	EW004561
*HOLDING CAPACITY	(1)	EW005315
*HOUSEHOLD SEWAGE SYSTEMS	(1)	EW004552
*HOUSING	(1)	EW004921
*HUMAN HEALTH	(1)	EW004632
HUMAN HEALTH	(7)	EW004624 EW004625 EW004626 EW004627 EW004630 EW004633 EW004634
*HUNTER'S MODEL	(1)	EW005194
*HYDRANTS	(2)	EW004049 EW005020
HYDRANTS	(1)	EW005476
*HYDRAULICS	(9)	EW004719 EW004858 EW004860 EW004861 EW004998 EW005008 EW005175 EW005176 EW005177
HYDRAULICS	(3)	EW004690 EW005023 EW005470
*HYDROGEN PEROXIDE	(1)	EW005158
HYDROGEN SULFIDE	(1)	EW005111
*HYDROLOGY	(6)	EW004403 EW004414 EW004415 EW004598 EW004639 EW005471
HYDROLOGY	(6)	EW004360 EW004918 EW005012 EW005046 EW005463 EW005464
HYDROLYSIS REACTIONS	(1)	EW005474
*HYDROSPHERE	(1)	EW004936
HYGIENE	(1)	EW004570
HYPOTHESIS TESTING	(1)	EW004937
ILLNESS	(1)	EW004576

*INCINERATION (3) EW004792 EW004958 EW005165
INCINERATION (2) EW005029 EW005040

*INCINERATORS (1) EW004985

INCINERATORS (2) EW004958 EW005267

INDIANA (1) EW005041

*INDICATOR BACTERIA (1) EW005096

*INDIRECT WATER REUSE (1) EW004982

*INDUSTRIAL HYGIENE (1) EW005286

*INDUSTRIAL SAFETY (1) EW005287

INDUSTRIAL SAFETY (1) EW004586

*INDUSTRIAL WASTES (18) EW003804 EW004584 EW004712 EW004752 EW004753 EW004756 EW004758
EW004916 EW004949 EW004958 EW005037 EW005068 EW005099 EW005100 EW005105
EW005179 EW005310 EW005319

INDUSTRIAL WASTES (9) EW004557 EW004777 EW004872 EW004959 EW004968 EW005007 EW005102
EW005184 EW005285

*INDUSTRIAL WASTEWATER (1) EW005145

INDUSTRIAL WATER (1) EW005068

INDUSTRIAL WATER RATES (1) EW004732

INDUSTRIAL WATER USE (1) EW005479

*INDUSTRIES (6) EW003560 EW004555 EW004569 EW005088 EW005097 EW005144

INDUSTRIES (2) EW004405 EW004600

*INDUSTRY (7) EW004609 EW004986 EW004988 EW004999 EW005126 EW005127 EW005286

INDUSTRY (1) EW005105

*INFILTRATION (1) EW005182

*INFLOW (1) EW005182

*INFORMATION DISSEMINATION (1) EW005262

*INFORMATION NETWORKS (1) EW005149

INFORMATION SOURCES (1) EW005149

*INFRARED SPECTRA (1) EW004942

INJECTION WELLS (1) EW005046

INJURIES (1) EW004576

*INNOVATION (1) EW004847

*INORGANIC CHEMISTRY (1) EW004938

*INORGANIC CONTAMINANTS (1) EW005048
INORGANIC POLLUTANTS (1) EW005166

*INORGANIC SOLIDS (1) EW005309

*INSECTICIDES (1) EW004609

INSECTICIDES (1) EW004973

*INSERVICE EDUCATION (1) EW004687

*INSPECTION (4) EW004058 EW005023 EW005032 EW005259

INSPECTION PROCEDURES (1) EW004576

*INSTALLATION (1) EW004980

INSTITUTIONAL CONSTRAINTS (1) EW004590

INSTITUTIONAL ISSUES (1) EW004561

*INSTRUCTION (1) EW004687

*INSTRUCTIONAL MATERIALS (32) EW004360 EW004370 EW004374 EW004403 EW004414 EW004415 EW004471 EW004501 EW004536 EW004586 EW004597 EW004598 EW004649 EW004660 EW004674 EW004675 EW004737 EW004915 EW004917 EW004933 EW004934 EW004935 EW004936 EW004937 EW004938 EW004939 EW004940 EW004947 EW004951 EW005112 EW005116 EW005259

INSTRUCTIONAL MATERIALS (5) EW004528 EW004969 EW004973 EW005115 EW005258

*INSTRUMENTATION (12) EW004684 EW004688 EW004719 EW004759 EW004933 EW004934 EW004935 EW004942 EW004980 EW005055 EW005466 EW005467

INSTRUMENTATION (3) EW004939 EW004940 EW005284

INTERDISCIPLINARY APPROACH (1) EW004945

*INTERNAL CORROSION (1) EW004921

INTERVIEWS (1) EW004874

ION EXCHANGE (1) EW005048

*IRON (3) EW004943 EW005016 EW005088

IRON (1) EW004045

*IRRIGATION (4) EW004945 EW004969 EW005011 EW005049

IRRIGATION (4) EW004364 EW004868 EW005463 EW005464

IRRIGATION SYSTEMS (1) EW004969

*JOB ENRICHMENT (1) EW004951

*JOB SATISFACTION (1) EW004865

JOB SATISFACTION (2) EW004751 EW004950

JOB SKILLS (1) EW005259

*JOB TRAINING	(1)	EW004751
KANSAS CITY	(1)	EW004992
*KENTUCKY	(1)	EW004360
KENTUCKY	(2)	EW004990 EW005197
*KINEMATICS	(1)	EW005471
*KINETICS	(1)	EW005070
*LABORATORIES	(1)	EW005465
*LABORATORY EQUIPMENT	(6)	EW004658 EW005022 EW005465 EW005466 EW005467 EW005468
LABORATORY EQUIPMENT	(4)	EW004360 EW004940 EW004956 EW005031
LABORATORY MATERIALS	(1)	EW003809
*LABORATORY METHODS	(1)	EW004939
*LABORATORY PROCEDURES	(18)	EW003694 EW004057 EW004569 EW004598 EW004649 EW004722 EW004842 EW004925 EW004954 EW004985 EW004997 EW005095 EW005102 EW005123 EW005151 EW005199 EW005285 EW005313
LABORATORY PROCEDURES	(4)	EW004737 EW004984 EW005036 EW005268
LABORATORY STUDIES	(1)	EW004941
*LABORATORY SUPPLIES	(2)	EW005465 EW005466
*LABORATORY TECHNIQUES	(12)	EW003560 EW004374 EW004513 EW004925 EW004933 EW004934 EW004935 EW004939 EW004940 EW004942 EW004957 EW005066
LABORATORY TECHNIQUES	(5)	EW004955 EW004956 EW004993 EW005197 EW005268
*LABORATORY TESTING	(1)	EW005185
LABORATORY TESTING	(1)	EW005048
*LABORATORY TESTS	(2)	EW004360 EW004993
LABORATORY TESTS	(1)	EW004680
*LAGOONS	(3)	EW004653 EW004710 EW005004
LAGOONS	(3)	EW004557 EW004707 EW004868
*LAKES	(1)	EW003694
*LAND APPLICATION	(10)	EW004585 EW004588 EW004636 EW004683 EW004850 EW004868 EW004880 EW004949 EW004990 EW005028
LAND APPLICATION	(5)	EW004653 EW004680 EW004892 EW004970 EW005118
*LAND DISPOSAL	(1)	EW004640
LANDFILL	(2)	EW004755 EW004990
*LANDFILLS	(8)	EW004471 EW004792 EW004917 EW004959 EW004988 EW005092 EW005093 EW005094
LANDFILLS	(3)	EW004674 EW004679 EW004968

*LAND RECLAMATION (1) EW005092
*LAND TREATMENT (3) EW004588 EW004640 EW004949
LAND TREATMENT (2) EW004054 EW004636
*LAND USE (9) EW004561 EW004585 EW004588 EW004683 EW004868 EW004959 EW004990 EW005012 EW005094
LAND USE (6) EW004712 EW004867 EW004880 EW005092 EW005093 EW005258
LAWS (1) EW005283
LEACHATES (1) EW004755
*LEACHING (2) EW004917 EW004969
LEACHING (1) EW004555
*LEAD (3) EW004756 EW005091 EW005136
LEADERSHIP (1) EW005052
LEAKAGE (1) EW004708
*LEARNING FACILITIES (1) EW004687
LEGAL CONSTRAINTS (1) EW004590
LEGAL ISSUES (1) EW004636
*LEGAL RESPONSIBILITIES (1) EW005054

*LEGISLATION (3) EW004568 EW005075 EW005283
LEGISLATION (14) EW004576 EW004585 EW004588 EW004597 EW004638 EW004713 EW004720 EW004919 EW004999 EW005016 EW005122 EW005319 EW005463 EW005464
LEVEES (1) EW005007
*LIFE CYCLE COSTING (1) EW004921
LIME (2) EW004850 EW005170
LIME SOFTENING (1) EW005048
*LIQUID CHROMATOGRAPHY (1) EW004939
LIQUID CHROMATOGRAPHY (2) EW004933 EW004942
*LIQUID-ION EXCHANGE (1) EW004680

*LOADING (1) EW005311
*LUBRICANT GAUGES (1) EW005154
*LUBRICATION (1) EW005154
*MAGNESIUM CARBONATE (1) EW004464

*MAINS	(1)	EW004716
MAINS	(1)	EW005023
*MAINTENANCE	(38)	EW004058 EW004595 EW004596 EW304678 EW004685 EW004686 EW004689 EW004706 EW004716 EW004853 EW004921 EW004932 EW004980 EW004992 EW004994 EW005018 EW005020 EW005023 EW005032 EW005039 EW005041 EW005043 EW005056 EW005059 EW005112 EW005154 EW005155 EW005156 EW005158 EW005178 EW005179 EW005181 EW005183 EW005259 EW005266 EW005267 EW005476 EW005478
MAINTENANCE	(12)	EW004362 EW004501 EW004594 EW004653 EW004690 EW004708 EW004852 EW004915 EW005027 EW005168 EW005169 EW005477
*MANAGEMENT	(31)	EW004557 EW004597 EW004598 EW004712 EW004758 EW004861 EW004863 EW004874 EW004923 EW004943 EW004945 EW004950 EW004951 EW004969 EW004970 EW004981 EW005013 EW005018 EW005020 EW005033 EW005042 EW005044 EW005054 EW005075 EW005112 EW005159 EW005161 EW005181 EW005258 EW005475 EW005480
MANAGEMENT	(16)	EW004471 EW004590 EW004684 EW004759 EW004792 EW004914 EW004918 EW004949 EW005022 EW005023 EW005162 EW005182 EW005196 EW005463 EW005464 EW005479
*MANAGEMENT GUIDELINES	(1)	EW004951
*MANAGEMENT GUIDES	(1)	EW004950
*MANAGEMENT (PERSONNEL)	(1)	EW005052
*MANAGEMENT SYSTEMS	(1)	EW004718
MANAGEMENT SYSTEMS	(1)	EW004914
*MANAGEMENT TOOLS	(1)	EW005477
MANAGEMENT TOOLS	(1)	EW005194
*MANGANESE	(2)	EW005016 EW005088
MANGANESE	(1)	EW004045
*MANHOLES	(1)	EW004708
*MANPOWER NEEDS	(1)	EW004932
MANPOWER UTILIZATION	(2)	EW005477 EW005478
*MANUALS	(3)	EW004374 EW005115 EW005116
*MANUFACTURERS	(3)	EW005466 EW005467 EW005468
MANUFACTURING	(1)	EW004405
MANUFACTURING INDUSTRY	(1)	EW005068
MANUFACTURING PROCESS	(1)	EW005129
*MARINE BIOLOGY	(1)	EW004941
MARKETING	(1)	EW004684
MARYLAND	(1)	EW005471
*MASSACHUSETTS	(2)	EW004687 EW005038

MASSACHUSETTS (1) EW004679
MATHEMATICAL APPLICATIONS (1) EW004746
*MATHEMATICAL EQUATIONS (1) EW005177
*MATHEMATICAL MODELING (1) EW005044
MATHEMATICAL MODELING (3) EW005480 EW005481 EW005482
*MATHEMATICAL MODELS (6) EW004555 EW004746 EW004858 EW005194 EW005318 EW005471
MATHEMATICAL MODELS (3) EW005193 EW005470 EW005472
*MATHEMATICS (1) EW004937
MATHEMATICS (2) EW004597 EW005176
*MEASUREMENT (7) EW004555 EW004719 EW004942 EW004980 EW005066 EW005285 EW005469
MEASUREMENT (9) EW004051 EW004658 EW004690 EW004940 EW005055 EW005123 EW005175 EW005284 EW005286
*MEASUREMENT EQUIPMENT (4) EW005022 EW005465 EW005466 EW005467
MEASUREMENT EQUIPMENT (1) EW005031
*MEASUREMENT INSTRUMENTS (2) EW004057 EW004997
MEASUREMENT TECHNIQUES (1) EW005484
*MECHANICAL EQUIPMENT (3) EW004915 EW005025 EW005026
*MEMBRANE FILTERS (1) EW004984
*MERCURY (2) EW004941 EW005137
*METAL ANALYSIS (1) EW004513
*METALS (12) EW004470 EW004513 EW004680 EW004712 EW004755 EW004756 EW004872 EW004985 EW005000 EW005016 EW005118 EW005170
METALS (7) EW003694 EW004627 EW004922 EW004957 EW005001 EW005095 EW005134
*METERS (1) EW005022
METERS (1) EW004682
*METHANE (1) EW004871
METHANE (1) EW005267
*MICROBIOLOGY (5) EW004638 EW004753 EW004755 EW004777 EW005096
MICROBIOLOGY (6) EW004754 EW004955 EW005014 EW005030 EW005031 EW005100
*MICROORGANISMS (1) EW004777
MICROPOLLUTION (1) EW004639
*MINE DRAINAGE (1) EW004753
*MINERALS (1) EW004045

MINERALS (2) EW004969 EW005016
*MINES (1) EW005097
MINES (1) EW005096
*MINING (2) EW004966 EW005088
MINNESOTA (1) EW005040
MISSISSIPPI RIVER (1) EW005198
*MIXERS (1) EW004690
*MODELING (1) EW004561
MODELING (1) EW004945
*MODELS (9) EW004718 EW004860 EW004861 EW004966 EW005010 EW005012 EW005064 EW005068 EW005070
MODELS (7) EW004639 EW004660 EW004737 EW004738 EW004841 EW004859 EW005463
MOLECULAR STRUCTURE ANALYSIS (1) EW004934
*MONITORING (14) EW004051 EW004555 EW004752 EW004863 EW004916 EW004923 EW004954 EW004955 EW004957 EW005022 EW005151 EW005182 EW005284 EW005286
MONITORING (13) EW004501 EW004569 EW004585 EW004588 EW004949 EW004959 EW004983 EW005031 EW005045 EW005047 EW005093 EW005101 EW005102
MORTALITY (1) EW004650
*MOTORS (2) EW004048 EW005019
MULTIVARIATE ANALYSIS (1) EW004403
*MUNICIPALITIES (7) EW004755 EW004873 EW004898 EW004914 EW004981 EW005013 EW005307
MUNICIPALITIES (7) EW004751 EW004872 EW004987 EW005007 EW005166 EW005319 EW005321
MUNICIPAL REFUSE (1) EW005092
*MUNICIPAL WASTES (3) EW003804 EW004949 EW005310
MUNICIPAL WASTES (4) EW004683 EW005099 EW005100 EW005285
MUNICIPAL WASTEWATER (1) EW005046
MUNICIPAL WATER RATES (1) EW004732
*MUNITIONS PLANTS (1) EW004569
*MUTAGENIC COMPOUNDS (1) EW004955
MUTAGENICITY (2) EW004626 EW004634
MUTAGENS (1) EW005151
*NATIONAL INTERIM PRIMARY DRINKING WATER REGULATION (1) EW004536
*NATIONAL SURVEYS (1) EW004920

*NATURAL RESOURCES	(2)	EW004590	EW004918				
NATURAL RESOURCES	(6)	EW004597	EW004639	EW004936	EW005033	EW005035	EW005193
NEEDS ASSESSMENT	(1)	EW004898					
*NETWORK ANALYSIS	(1)	EW004856					
NEUTRON ACTIVATION ANALYSIS	(1)	EW005095					
*NEW YORK	(2)	EW004986	EW005056				
NEW YORK	(3)	EW004994	EW005039	EW005040			
*NICKLE	(1)	EW004627					
*NITRATES	(1)	EW004569					
*NITROBENZENE	(1)	EW004632					
*NITROGEN	(1)	EW004869					
NITROGEN	(5)	EW003694	EW005070	EW005110	EW005146	EW005276	
NOISE POLLUTION	(1)	EW004973					
*NOISE POLLUTION CONTROL	(1)	EW005084					
*NONPOINT POLLUTION	(3)	EW004645	EW004966	EW004967			
NONPOINT POLLUTION	(1)	EW005146					
*NONPOINT SOURCE POLLUTION	(2)	EW004555	EW005258				
NONPOINT SOURCE POLLUTION	(2)	EW004969	EW004971				
*NONPOINT SOURCES	(2)	EW004966	EW004967				
NON-SEPTIC TREATMENT SYSTEMS	(1)	EW004552					
*NUCLEAR MAGNETIC RESONANCE	(1)	EW004934					
NUCLEAR RADIATION	(2)	EW005127	EW005463				
NUTRIENT RECYCLING	(1)	EW005108					
NUTRIENT REMOVAL	(1)	EW004054					
NUTRIENTS	(2)	EW004645	EW005102				
OCCUPATIONAL CANCER	(1)	EW004570					
*OCCUPATIONAL DISEASES	(1)	EW005286					
*OCCUPATIONAL HAZARDS	(1)	EW004609					
*OCCUPATIONAL HEALTH	(1)	EW004576					
*OCCUPATIONAL SAFETY	(2)	EW004576	EW005075				
OCCUPATIONAL TITLES	(1)	EW004932					
*OCEAN ENGINEERING	(2)	EW004858	EW004860				

*OCEANOLOCY	(4)	EW004528 EW004941 EW005116 EW005124
OCEANOLOCY	(2)	EW004860 EW005115
*OCEAN OUTFALLS	(1)	EW004858
*ODOR	(2)	EW004046 EW005484
*ODOR CONTROL	(2)	EW004056 EW005002
*ODORS	(5)	EW004987 EW004991 EW005017 EW005063 EW005158
ODORS	(2)	EW005014 EW005030
*OHIO	(2)	EW004362 EW004916
*OIL	(2)	EW005115 EW005116
*OIL POLLUTION	(1)	EW005106
*OIL POLLUTION CONTROL	(1)	EW005106
*OIL SPILLS	(3)	EW005106 EW005115 EW005116
*OIL WATER SEPARATORS	(1)	EW005106
*ON-SITE WASTEWATER TREATMENT	(1)	EW004867
*OPERATING ENGINEERING	(1)	EW004752
*OPERATING EXPENSES	(3)	EW004594 EW005011 EW005013
*OPERATIONS	(4)	EW004415 EW004932 EW005010 EW005258
*OPERATIONS (WASTEWATER)	(68)	EW003235 EW004053 EW004054 EW004055 EW004056 EW004057 EW004058 EW004370 EW004501 EW004585 EW004588 EW004596 EW004640 EW004653 EW004678 EW004683 EW004688 EW004689 EW004690 EW004711 EW004759 EW004841 EW004849 EW004850 EW004851 EW004866 EW004869 EW004943 EW004947 EW004985 EW004996 EW005025 EW005026 EW005027 EW005028 EW005030 EW005031 EW005037 EW005051 EW005053 EW005056 EW005058 EW005059 EW005063 EW005064 EW005065 EW005068 EW005099 EW005100 EW005109 EW005110 EW005111 EW005112 EW005125 EW005126 EW005127 EW005157 EW005158 EW005159 EW005165 EW005169 EW005173 EW005183 EW005265 EW005267 EW005269 EW005316 EW005317
OPERATIONS (WASTEWATER)	(16)	EW003804 EW004600 EW004684 EW004843 EW004880 EW004988 EW005040 EW005042 EW005062 EW005170 EW005171 EW005172 EW005174 EW005180 EW005184 EW005264
*OPERATIONS (WATER)	(35)	EW004043 EW004044 EW004045 EW004046 EW004051 EW004360 EW004464 EW004598 EW004600 EW004720 EW004848 EW004919 EW004955 EW004981 EW004989 EW004991 EW005015 EW005016 EW005017 EW005039 EW005043 EW005044 EW005054 EW005055 EW005159 EW005160 EW005161 EW005168 EW005181 EW005285 EW005475 EW005476 EW005477 EW005481 EW005482
OPERATIONS (WATER)	(6)	EW003804 EW004684 EW004863 EW005047 EW005196 EW005480
*OPERATIONS (WATER TREATMENT)	(3)	EW004658 EW004675 EW005014
OPERATORS	(1)	EW005181
*OPERATOR TRAINING	(1)	EW004751

*OPTIMIZATION MODELS	(1)	EW004711
*ORGANIC CHEMICALS	(3)	EW004679 EW005195 EW005196
*ORGANIC CHEMISTRY	(6)	EW004374 EW004631 EW004934 EW004938 EW004940 EW005036
ORGANIC CHEMISTRY	(1)	EW004924
*ORGANIC COMPOUNDS	(6)	EW004557 EW004849 EW004870 EW004942 EW005062 EW005067
ORGANIC COMPOUNDS	(4)	EW003694 EW005118 EW005132 EW005484
*ORGANIC FERTILIZER	(1)	EW004683
ORGANIC POLLUTANTS	(1)	EW005319
*ORGANIC POLLUTION	(1)	EW005320
ORGANIC POLLUTION	(1)	EW005166
ORGANIC POLYMERS	(1)	EW004464
*ORGANICS REMOVAL	(2)	EW005198 EW005199
*ORGANIC SUBSTANCES	(1)	EW005310
*ORGANIC WASTES	(1)	EW004557
*ORGANISMS	(1)	EW004777
*ORGANOCHLORIDES	(1)	EW004609
ORIENTATION PROCEDURES	(1)	EW004951
*OUTFALLS	(1)	EW004690
*OVERFLOW POLLUTION	(1)	EW005318
*OVERLAND FLOW	(2)	EW004868 EW005471
*OXIDATION	(4)	EW004866 EW004868 EW004869 EW005310
OXIDATION	(4)	EW004464 EW004737 EW004754 EW005165
*OXIDATION DITCHES	(1)	EW004847
*OXIDATION PONDS	(2)	EW004053 EW005027
OXYGEN	(2)	EW004643 EW005002
*OXYGEN ACTIVATED SLUDGE	(2)	EW004643 EW004996
*OZONE	(3)	EW004681 EW004754 EW004848
OZONE	(4)	EW004558 EW004850 EW004924 EW005056
OZONE MONITOR	(1)	EW004682
*PACIFIC NORTHWEST	(1)	EW005479
PACIFIC NORTHWEST	(1)	EW004364

*PACKAGE PLANTS	(1)	EW005043						
*PAINTS	(1)	EW005178						
*PAPER INDUSTRY	(7)	EW005101	EW005122	EW005123	EW005124	EW005125	EW005126	EW005127
PAPER INDUSTRY	(1)	EW005463						
*PARAPROFESSIONAL PERSONEL	(1)	EW005259						
PARTICULATE REMOVAL	(1)	EW005473						
*PARTICULATES	(1)	EW005473						
PATHOGENS	(3)	EW004469	EW004943	EW005317				
PEAK FLOWS	(1)	EW005311						
*PEAK LOADS	(1)	EW005311						
PERCOLATION	(1)	EW004867						
*PERFORMANCE CRITERIA	(1)	EW004914						
PERMITS	(1)	EW005307						
*PERSONNEL	(3)	EW004865	EW005052	EW005159				
*PERSONNEL EVALUATION	(1)	EW005052						
*PERSONNEL NEEDS	(1)	EW004932						
PEST CONTROL	(1)	EW004059						
*PESTICIDES	(2)	EW004609	EW004645					
PESTICIDES	(6)	EW004639	EW004967	EW005095	EW005102	EW005108	EW005258	
*PEST MANAGEMENT	(1)	EW004059						
PETROLEUM	(1)	EW004936						
PETROLEUM INDUSTRY	(1)	EW004414						
*PH	(4)	EW004925	EW005080	EW005198	EW005317			
PH	(2)	EW004850	EW005047					
PHENOL	(1)	EW005111						
*PHENOLS	(1)	EW004631						
PHILADELPHIA	(1)	EW004922						
*PHOSPHATES	(1)	EW005138						
PHOSPHATES	(1)	EW005061						
PHOSPHORIC ACID	(1)	EW004956						
PHOSPHOROUS	(1)	EW005276						

PHOSPHORUS (4) EW003694 EW005110 EW005146 EW005170
*PHOTOGRAPHY (1) EW003560
*PHTHALATE ESTERS (1) EW004625
PHYSICAL ANALYSIS (1) EW004649
*PHYSICAL SCIENCES (1) EW005464
*PHYSICAL TREATMENT (1) EW005125
PHYSICAL TREATMENT (1) EW005028
*PHYSICIANS (2) EW004469 EW004470
*PHYSICS (1) EW005281
*PHYSIOLOGY (2) EW004650 EW004957
PILOT PLANTS (1) EW005320
*PILOT PROJECTS (4) EW004754 EW004756 EW004757 EW004873
PILOT PROJECTS (1) EW004995
*PILOT STUDIES (2) EW004993 EW005144
PILOT STUDIES (1) EW005048
*PIPE FLOW (3) EW005175 EW005176 EW005472
*PIPELINES (1) EW005470
*PIPES (23) EW004047 EW004052 EW004708 EW004714 EW004715 EW004716 EW004717 EW004855 EW004921 EW004922 EW004923 EW004968 EW004994 EW005000 EW005008 EW005018 EW005024 EW005160 EW005175 EW005182 EW005315 EW005472 EW005476
PIPES (2) EW005177 EW005478
*PIPE SIZE (2) EW005160 EW005177
PLANKTON (1) EW005275
*PLANNING (22) EW004561 EW004590 EW004597 EW004639 EW004732 EW004841 EW004854 EW004874 EW004898 EW004932 EW004945 EW005010 EW005012 EW005013 EW005033 EW005042 EW005146 EW005159 EW005258 EW005318 EW005479 EW005480
PLANNING (14) EW004552 EW004709 EW004861 EW004868 EW004892 EW004950 EW004966 EW004971 EW004989 EW004990 EW005196 EW005462 EW005463 EW005464
PLANT CAPACITY (1) EW004919
PLANT DESIGN (1) EW005122
PLANT FAILURE (1) EW004852
*PLANT GROWTH (1) EW005268
*PLANT MODIFICATIONS (1) EW005122
PLANT OPERATORS (1) EW005112
*PLANTS (1) EW005124

PLASTIC PIPES	(1)	EW004047
*PLUMBING	(4)	EW004364 EW004714 EW004921 EW004923
PLUMBING	(2)	EW004715 EW005020
*PLUMBING FIXTURES	(1)	EW005194
*PLUNGER PUMPS	(1)	EW005179
*POINT POLLUTION	(1)	EW004917
POINT POLLUTION	(2)	EW004536 EW005146
*POLICIES	(1)	EW005146
POLICIES	(1)	EW005262
*POLICY	(1)	EW005307
POLICY	(1)	EW005463
*POLICY FORMATION	(1)	EW004918
POLICY FORMATION	(2)	EW004914 EW005164
*POLLUTANTS	(2)	EW005057 EW005284
POLLUTANTS	(1)	EW004598
*POLLUTION	(28)	EW004469 EW004470 EW004555 EW004639 EW004645 EW004755 EW004867 EW004917 EW004924 EW004954 EW004957 EW004958 EW004967 EW004968 EW004971 EW005033 EW005035 EW005036 EW005088 EW005091 EW005106 EW005146 EW005151 EW005271 EW005275 EW005276 EW005280 EW005281
POLLUTION	(33)	EW003694 EW004528 EW004568 EW004590 EW004636 EW004649 EW004792 EW004859 EW004920 EW004941 EW004942 EW004966 EW004982 EW004987 EW004996 EW005002 EW005014 EW005017 EW005057 EW005115 EW005116 EW005124 EW005132 EW005134 EW005135 EW005136 EW005137 EW005138 EW005139 EW005140 EW005141 EW005142 EW005165
*POLLUTION CONTROL	(3)	EW004679 EW004971 EW005143
POLLUTION CONTROL	(6)	EW004370 EW004677 EW004681 EW005092 EW005094 EW005269
POLLUTION CONTROL EQUIPMENT	(1)	EW005166
*POLLUTION ENGINEERING	(2)	EW005283 EW005284
*POLLUTION STANDARDS	(1)	EW004941
*POLYBROMINATED BIPHENYLS	(1)	EW005139
*POLYCHLORINATED BIPHENYLS	(1)	EW004634
*POLYMERS	(1)	EW004691
POLYMERS	(2)	EW005047 EW005185
*POLYNUCLEAR AROMATIC HYDROCARBONS	(1)	EW005140
*POROUS MEDIA	(1)	EW004414
*POST SECONDARY EDUCATION	(4)	EW004360 EW004414 EW005258 EW005259

*POSTSECONDARY EDUCATION	(1)	EW004687
POST SECONDARY EDUCATION	(2)	EW004374 EW004947
*POTABLE WATER	(5)	EW004717 EW004863 EW004923 EW004956 EW005192
POTABLE WATER	(4)	EW004364 EW004558 EW004993 EW005168
POTASSIUM PERMANGANATE	(1)	EW004991
POTENTIOMETRY	(1)	EW005095
PRECIPTATION	(1)	EW005471
*PREDICTION	(1)	EW004918
*PREDICTION METHODS	(1)	EW004966
*PREDICTIVE MEASUREMENT	(1)	EW004998
PRESSURE CARBON CONTACTORS	(1)	EW005168
*PRESTRESSED CONCRETE	(1)	EW004685
*PRESTRESSED CONCRETE STRUCTURES	(1)	EW004706
*PRETREATMENT	(2)	EW005198 EW005319
PRETREATMENT	(5)	EW003235 EW004043 EW004044 EW004598 EW004917
*PREVENTIVE MAINTENANCE	(1)	EW004992
*PREVENTIVE MEASURES	(1)	EW005478
PRICING POLICIES	(1)	EW004732
PRIMARY TREATMENT	(2)	EW004850 EW005026
*PROBABILITY	(2)	EW004403 EW004937
*PROBLEM SOLVING	(3)	EW005037 EW005041 EW005053
*PROCESS CONTROL	(7)	EW004051 EW004691 EW004851 EW005053 EW005060 EW005061 EW005067
PROCESS CONTROL	(3)	EW005051 EW005068 EW005071
*PRODUCT DEVELOPMENT	(1)	EW005266
*PRODUCTIVITY	(1)	EW004865
*PRODUCT REVIEW	(1)	EW004682
*PROGRAM COSTS	(1)	EW004914
*PROGRAM DESCRIPTIONS	(2)	EW004914 EW004916
*PROGRAM DEVELOPMENT	(1)	EW004914
*PROGRAM EFFECTIVENESS	(1)	EW004914
*PROGRAM GUIDELINES	(1)	EW004576
*PROGRAM IMPLEMENTATION	(1)	EW005307

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 PROTECTIVE EQUIPMENT               (1)    EW004586
*PUBLIC FACILITIES                  (1)    EW004059

 PUBLIC FACILITIES                  (1)    EW004060

*PUBLIC HEALTH                      (23)     EW004059  EW004060  EW004469  EW004470  EW004471  EW004570  EW004595
                                    EW004626 EW004633  EW004854  EW004864  EW004920  EW004924  EW004982  EW005014
                                    EW005015 EW005017  EW005034  EW005035  EW005163  EW005164  EW005314  EW005316

 PUBLIC HEALTH                      (26)     EW004364  EW004558  EW004568  EW004624  EW004625  EW004627  EW004630
                                    EW004631 EW004634  EW004635  EW004636  EW004638  EW004640  EW004717  EW004863
                                    EW004936 EW004941  EW004955  EW005016  EW005036  EW005091  EW005092  EW005094
                                    EW005159 EW005192  EW005195

*PUBLIC PARTICIPATION               (1)    EW004973
 PUBLIC PARTICIPATION               (2)    EW004874  EW004959
 PUBLIC POLICY                      (1)    EW005035
*PUBLIC RELATIONS                   (1)    EW005063
 PUBLIC RELATIONS                   (2)    EW004959  EW005192
*PUBLIC WORKS                       (1)    EW004914
 PUBLIC WORKS                       (1)    EW004992
*PULP INDUSTRY                      (1)    EW005101
 PULP INDUSTRY                      (1)    EW005463


*PUMPING STATIONS                   (2)    EW004594  EW004853
 PUMP MOTORS                        (1)    EW005003
*PUMPS                              (10)     EW003235  EW004048  EW004594  EW004915  EW005019  EW005025  EW005155
                                    EW005162 EW005259  EW005270
 PUMPS                              (2)    EW004682  EW005472
 PUMP STATIONS                      (1)    EW005155
*PYROLYSIS                          (2)    EW004792  EW004958
*QUALITY CONTROL                    (1)    EW005022
 QUALITY CONTROL                    (3)    EW004708  EW005026  EW005171
*QUANTITATIVE SITUATIONAL ANALYSIS  (1)    EW004874
*QUESTIONAIRES                      (1)    EW004950
*RADIATION                          (1)    EW003809
 RADIOACTIVE MATERIALS              (1)    EW004469
*RADIONUCLIDES                      (1)    EW005048
*RAINFALL                           (1)    EW004998
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RANDOM VARIABLES (1) EW004403
*RATES (2) EW004713 EW004916
*RATHATION METHOD (1) EW004721
*REACTION RATES (1) EW005265
REACTIVATION (1) EW005167

*RECLAIMED WATER (2) EW005045 EW005145
RECLAIMED WATER (1) EW005046
RECLAMATION (1) EW005001
*RECORD KEEPING (5) EW004360 EW004596 EW004842 EW005287 EW005477
RECORD KEEPING (1) EW004984
*RECREATION (2) EW004059 EW004060
*RECYCLING (6) EW004464 EW004970 EW004982 EW005028 EW005049 EW005145
RECYCLING (9) EW004590 EW004638 EW004754 EW005033 EW005035 EW005101 EW005105
EW005109 EW005122
REDOX REACTIONS (1) EW005474
REDUCTION (1) EW004737
*REDUNDANCY (1) EW004852
*REFERENCES (1) EW004860
*REFUSE (1) EW005040
*REFUSE DISPOSAL (1) EW005093
REFUSE DISPOSAL (1) EW005084
*REGIONAL PLANNING (2) EW004864 EW005013
REGRESSION (1) EW004403

*REGULATIONS (22) EW004568 EW004576 EW004624 EW004626 EW004627 EW004630 EW004632
EW004634 EW004635 EW004638 EW004677 EW004958 EW004959 EW004984 EW004999
EW005075 EW005132 EW005141 EW005143 EW005165 EW005262 EW005475
REGULATIONS (14) EW004471 EW004552 EW004597 EW004625 EW004715 EW004919 EW004922
EW004923 EW005122 EW005134 EW005139 EW005140 EW005166 EW005307
REGULATORY ACTIONS (1) EW005129
*RELIABILITY (2) EW004852 EW004853
RELIABILITY (1) EW004873
REPAIRS (2) EW004685 EW005478

REPORTS (1) EW004590
*REQUIREMENTS (1) EW004677
*RESEARCH (15) EW004405 EW004639 EW004705 EW004755 EW004659 EW004920 EW004924 EW004925 EW004942 EW004956 EW004995 EW005106 EW005145 EW005194 EW005316
RESEARCH (11) EW004584 EW004645 EW004680 EW004681 EW004933 EW004934 EW004945 EW005035 EW005046 EW005144 EW005321
*RESEARCH METHODOLOGY (2) EW004922 EW005268
RESEARCH METHODOLOGY (1) EW004923
RESEARCH NEEDS (1) EW005047
*RESEARCH PROJECTS (1) EW005268
RESEARCH PROJECTS (1) EW005059
*RESEARCH REVIEWS (3) EW004636 EW004640 EW004645
RESEARCH REVIEWS (PUBLICATIONS) (1) EW005271
*RESERVOIRS (4) EW004050 EW004986 EW005010 EW005021
RESERVOIRS (2) EW004918 EW005023
*RESIDENTIAL WATER USE (1) EW004705
RESOURCE ALLOCATION (1) EW004757
*RESOURCE RECOVERY (1) EW004792
RESOURCE RECOVERY (2) EW004464 EW004471
RESOURCES (1) EW005280
*RETROFITTING (1) EW005169
*REVEGETATION (1) EW005001
*REVENUE (1) EW004463
*REVERSE OSMOSIS (2) EW005181 EW005185
REVERSE OSMOSIS (1) EW005048
REVIEWS (1) EW004609
*RISK ANALYSIS (1) EW004918
RISK ASSESSMENT (1) EW005196
RISK MANAGEMENT STRATEGIES (1) EW005044
*RIVERS (4) EW003694 EW004555 EW004957 EW005124
ROADS (1) EW005258
ROADWAY CONSTRUCTION (1) EW004362
*ROTATING BIOLOGICAL CONTACTORS (1) EW004873

RULES	(1)	EW004576
*RUNOFF	(1)	EW005471
RUNOFF	(1)	EW004555
*RUNOFF WATERS	(1)	EW004746
*SAFE DRINKING WATER ACT	(6)	EW004536 EW004638 EW004675 EW004842 EW004973 EW005475
SAFE DRINKING WATER ACT	(2)	EW004658 EW004919
*SAFETY	(13)	EW003235 EW003809 EW004362 EW004501 EW004576 EW004586 EW004609 EW005003 EW005032 EW005057 EW005075 EW005286 EW005287
SAFETY	(2)	EW004751 EW005031
*SALINITY	(1)	EW004969
SALT	(1)	EW005038
*SALT RUNOFF	(1)	EW005038
*SAMPLING	(6)	EW004051 EW004649 EW004738 EW004758 EW005066 EW005314
SAMPLING	(11)	EW004057 EW004403 EW004638 EW004660 EW004737 EW004842 EW004985 EW005031 EW005095 EW005102 EW005123
*SAND FILTRATION SYSTEMS	(1)	EW004704
*SANITAION	(1)	EW005159
*SANITARY ENGINEERING	(1)	EW004932
*SANITARY FACILITIES	(3)	EW004059 EW004060 EW004528
*SANITARY LANDFILL CRITERIA	(1)	EW005092
*SANITARY LANDFILLS	(2)	EW005092 EW005093
*SANITARY SEWERS	(1)	EW005315
*SANITATION	(1)	EW004988
*SCHOOL FACILITIES	(1)	EW004847
SCIENCE EDUCATION	(2)	EW004374 EW005262
*SCIENCE EQUIPMENT	(3)	EW005465 EW005466 EW005468
SCIENCE EQUIPMENT	(1)	EW005467
*SCIENTIFIC LITERACY	(1)	EW005262
*SCIENTIFIC PERSONNEL	(1)	EW005262
*SCIENTIFIC RESEARCH	(1)	EW005469
SCIENTIFIC RESEARCH	(1)	EW005275
SCREENING	(1)	EW005026

SCREENS (2) EW004043 EW004044
*SEAWATER INTRUSION (1) EW005062
*SECONDARY TREATMENT (7) EW004053 EW004687 EW004898 EW005007 EW005027 EW005060 EW005065
SECONDARY TREATMENT (2) EW005056 EW005071
*SEDIMENT (1) EW005108
*SEDIMENTATION (1) EW004645
SEDIMENTATION (4) EW004043 EW004598 EW005014 EW005473
*SEDIMENTS (3) EW004649 EW004971 EW004997
SEDIMENTS (1) EW004957
*SEISMIC ANALYSIS (1) EW004855
*SEISMIC DAMAGE (1) EW004855
*SEMINAR PROCEEDINGS (1) EW004463
SENSORY ASSESSMENT (1) EW005484
*SEPTAGE TREATMENT (1) EW005312
*SEPTIC SYSTEMS (2) EW004686 EW005316
SEPTIC SYSTEMS (2) EW004679 EW004968
*SEPTIC TANKS (3) EW004552 EW004868 EW005312
SEPTIC TANKS (1) EW004867
*SERVICE CONNECTIONS (1) EW005018
*SERVICE ORGANIZATIONS (1) EW005469
SETTLING TANKS (1) EW005026
SETTLING VELOCITY (1) EW004866
*SEWAGE (11) EW004528 EW004584 EW004585 EW004588 EW004636 EW004858 EW004859
EW004949 EW004958 EW005049 EW005097
SEWAGE (9) EW004643 EW004777 EW005092 EW005095 EW005096 EW005109 EW005110
EW005145 EW005321
*SEWAGE FILTRATION (2) EW005109 EW005110
*SEWAGE TREATMENT (1) EW004528
*SEWAGE WET WELLS (1) EW005003
*SEWAGE WORKS (1) EW005321
*SEWER FAILURE (1) EW004595
*SEWER OVERFLOW (1) EW005318
*SEWERS (12) EW004052 EW004058 EW004595 EW004708 EW004898 EW004932 EW004992
EW004999 EW005024 EW005032 EW005182 EW005318

SEWERS (2) EW004968 EW005025
*SHIPS (1) EW004528

*SHORELINE PROTECTION (2) EW005115 EW005116

SHOTCRETE (1) EW004685

SIGHT GLASSES (1) EW005154

SILICON (1) EW003694

*SILVICULTURE (2) EW004966 EW005258

*SIMULATIONS (1) EW004639

SIMULATIONS (1) EW005012

SITE DEVELOPMENT (1) EW005001

SITE EVALUATION (1) EW004686

SITE PLANNING (1) EW004971

SITE SELECTION (5) EW004059 EW004959 EW005092 EW005093 EW005094

*SLUDGE (25) EW003235 EW004464 EW004680 EW004683 EW004707 EW004712 EW004720 EW004757 EW004850 EW004851 EW004866 EW004958 EW004959 EW004996 EW005001 EW005029 EW005040 EW005049 EW005092 EW005094 EW005099 EW005100 EW005157 EW005165 EW005179

SLUDGE (11) EW004677 EW004755 EW004990 EW005005 EW005016 EW005037 EW005051 EW005060 EW005061 EW005264 EW005312

*SLUDGE CHARACTERISTICS (1) EW005165

*SLUDGE COLLECTORS (1) EW005266

*SLUDGE CONCENTRATION (1) EW005051

SLUDGE CONDITIONING (1) EW005264

*SLUDGE DEWATERING (1) EW004691

SLUDGE DEWATERING (1) EW004055

*SLUDGE DIGESTION (1) EW005029

SLUDGE DIGESTION (1) EW004055

*SLUDGE DISPOSAL (6) EW004683 EW004720 EW004990 EW005165 EW005264 EW005317

SLUDGE DISPOSAL (1) EW005267

*SLUDGE HANDLING (1) EW005179

*SLUDGE STABILIZATION (1) EW004055

*SLUDGE TREATMENT (1) EW005067

*SMALL COMMUNITIES (1) EW005042

*SMALL FLOWS	(1)	EW004880			
*SNOW REMOVAL	(1)	EW005041			
SOCIAL SCIENCES	(1)	EW005464			
SODIUM	(1)	EW005038			
*SODIUM BICARBONATE	(2)	EW003804	EW004678		
*SOFTENING	(1)	EW005016			
SOFTENING	(1)	EW004045			
*SOIL	(2)	EW004645	EW005118		
SOIL CHARACTERISTICS	(1)	EW004640			
SOIL CONDITIONERS	(1)	EW004970			
*SOIL CONSERVATION	(1)	EW005001			
SOIL CONSERVATION	(1)	EW004969			
SOIL PHYSICS	(1)	EW004414			
*SOIL POLLUTION	(1)	EW004570			
SOILS	(2)	EW004552	EW004954		
*SOIL SCIENCE	(1)	EW004414			
SOIL STABILIZATION	(1)	EW004971			
SOIL TYPE	(1)	EW005316			
*SOLAR COLLECTORS	(1)	EW005462			
*SOLAR ENERGY	(1)	EW005462			
SOLAR ENERGY	(2)	EW004843	EW005267		
SOLID PARTICLES	(1)	EW005473			
SOLIDS	(1)	EW005088			
*SOLIDS TREATMENT	(1)	EW004757			
*SOLID WASTE POLLUTION	(1)	EW005101			
*SOLID WASTE POLLUTION CONTROL	(1)	EW005101			
*SOLID WASTES	(2)	EW004471	EW004792		
SOLID WASTES	(4)	EW003235	EW004054	EW004055	EW004973
SOLVENT EXTRACTIONS	(1)	EW004680			
*SOLVENTS	(1)	EW004680			
SOUTH CAROLINA	(1)	EW004678			
SPECIFICATIONS	(1)	EW004853			

*SPECIFIC CONDUCTANCE (1) EW004569
*SPECTROMETRY (2) EW004935 EW004942
*SPECTROSCOPY (2) EW004934 EW004935
SPECTROSCOPY (2) EW004933 EW005095
*SPILL PREVENTION (1) EW005287
*SPILLS (3) EW004586 EW004674 EW005287
*STABILIZATION (1) EW005317
*STABILIZATION PONDS (1) EW004653
*STANDARD METHODS (1) EW004638
*STANDARDS (15) EW004576 EW004609 EW004624 EW004627 EW004628 EW004635 EW004638 EW004872 EW004919 EW005079 EW005080 EW005136 EW005138 EW005475 EW005484
STANDARDS (8) EW004853 EW004892 EW004922 EW004923 EW005171 EW005271 EW005319 EW005478
*STATE REGULATIONS (1) EW005080
STATE REGULATIONS (2) EW005079 EW005316
*STATISTICAL ANALYSIS (2) EW004738 EW005062
STATISTICAL ANALYSIS (1) EW004998
*STATISTICAL METHODS (1) EW004738
*STATISTICS (2) EW004403 EW004937
STATISTICS (1) EW004933
*STATUS ASSESSMENT (12) EW005129 EW005131 EW005132 EW005134 EW005135 EW005136 EW005137 EW005138 EW005139 EW005140 EW005141 EW005142
STEEL PIPES (1) EW004047
*STOICHIOMETRY (1) EW005070
*STORAGE (1) EW005315
STORAGE (2) EW004597 EW004986
*STORM RUNOFF (1) EW004746
*STORM SEWERS (1) EW004992
*STORMWATER (2) EW004859 EW005471
STORMWATER (2) EW004746 EW004992
*STREAMS (1) EW005124
STREAMS (1) EW004639
*SULFATES (1) EW005088
*SULFIDES (1) EW005158

SULFUR DIOXIDE (2) EW005171 EW005283
*SUPERVISION (4) EW004951 EW004983 EW005022 EW005031
*SUPPLIERS (1) EW005469
*SURCHARGES (1) EW004916
*SURFACE RUNOFF (6) EW004639 EW004860 EW004992 EW004998 EW005318 EW005471
SURFACE RUNOFF (1) EW004967
SURFACE WATER (2) EW004590 EW004598
*SURFACE WATERS (1) EW004955
SURFACE WATERS (1) EW005079
*SURVEYS (3) EW004950 EW005058 EW005146
SURVEYS (3) EW004874 EW005047 EW005314
SUSPENDED SOLIDS (4) EW004649 EW004866 EW004957 EW005146
*SWIMMING POOLS (1) EW004060
*SYMPOSIA (1) EW004660
*SYMPOSIUM PROCEEDINGS (2) EW004892 EW005151
*SYNTHETIC ORGANICS (1) EW005196
*SYSTEMS ANALYSIS (1) EW004718
SYSTEMS ENGINEERING (1) EW005470
TAILINGS (1) EW005001
*TANKS (2) EW004685 EW004706
*TARDINESS (1) EW004951
*TASTE (2) EW004046 EW005484
*TASTES (3) EW004987 EW004991 EW005017
TASTES (1) EW005014
*TAXES (1) EW005280
*TEACHING GUIDES (1) EW004374
*TECHNICIANS (1) EW004932
TECHNOLOGICAL ADVANCEMENT (1) EW004682
*TECHNOLOGICAL ADVANCEMENTS (1) EW004684
TECHNOLOGICAL DEVELOPMENT (1) EW004874
*TECHNOLOGY (5) EW004405 EW004792 EW004996 EW005088 EW005145
TECHNOLOGY (12) EW004370 EW004636 EW004720 EW004777 EW004936 EW004980 EW005005
EW005035 EW005100 EW005122 EW005143 EW005144

TELEMETRY (1) EW004983
TEMPERATURE (1) EW005002
*TERTIARY TREATMENT (3) EW004054 EW004849 EW005028
TERTIARY TREATMENT (1) EW005056
*TESTING (1) EW005469
TESTING (2) EW005197 EW005199
TEXAS (1) EW005470
*TEXTBOOKS (4) EW004370 EW004403 EW004414 EW004501
TEXTBOOKS (1) EW004374
*THAILAND (1) EW004707
THEORIES (1) EW005194
THERMAL CONDITIONING (1) EW005267
*THERMAL DISPOSAL (1) EW005040
THERMOCHEMICAL PROCESSING (1) EW004970
*TOLUENE (1) EW004624
*TOTAL ORGANIC CARBON (1) EW005285
*TOTAL ORGANIC HALOGEN (1) EW005199
*TOXIC CHEMICALS (10) EW005129 EW005131 EW005132 EW005134 EW005135 EW005136 EW005137 EW005140 EW005142 EW005143
TOXIC CHEMICALS (3) EW005138 EW005139 EW005141
*TOXICITY (1) EW004650
TOXICITY (1) EW004586
*TOXICOLOGY (13) EW004570 EW004609 EW004624 EW004625 EW004626 EW004627 EW004630 EW004631 EW004633 EW004634 EW004635 EW004924 EW004941
TOXICOLOGY (3) EW004632 EW004936 EW005151
*TOXIC SUBSTANCES (35) EW004568 EW004586 EW004624 EW004625 EW004626 EW004627 EW004628 EW004630 EW004631 EW004632 EW004633 EW004634 EW004635 EW004650 EW004674 EW004675 EW004677 EW004872 EW004959 EW005057 EW005091 EW005135 EW005136 EW005137 EW005138 EW005139 EW005140 EW005141 EW005143 EW005149 EW005151 EW005196 EW005197 EW005286 EW005310
TOXIC SUBSTANCES (10) EW003809 EW004360 EW004469 EW004949 EW004973 EW005131 EW005132 EW005134 EW005142 EW005171
*TOXIC SUBSTANCES CONTROL ACT (1) EW004568
TOXIC SUBSTANCES CONTROL ACT (TSCA) (1) EW005149
TOXIC WASTES (2) EW004872 EW005146
TOXINS (1) EW005057

TRACE ELEMENTS	(3)	EW004470	EW004513	EW004737		
*TRACE METAL CATALYSIS	(1)	EW005474				
*TRACE METALS	(1)	EW005474				
TRACE METALS	(1)	EW004755				
TRACE ORGANICS	(1)	EW004993				
*TRAFFIC CONTROL	(1)	EW004362				
*TRAFFIC SIGNS	(1)	EW004362				
*TRAINING	(5)	EW003235	EW004751	EW004932	EW005112	EW005159
TRAINING	(1)	EW004576				
*TRAINING PROGRAMS	(1)	EW005259				
*TRANSITION METALS	(1)	EW005137				
TRANSITION METALS	(1)	EW005134				
TRANSPORTATION	(1)	EW004362				
*TREND ANALYSIS	(1)	EW005479				
TREND ANALYSIS	(1)	EW005271				
*TRICHLOROETHYLENE	(1)	EW005141				
*TRICKLING FILTER SYSTEM	(1)	EW005180				
*TRIHALOMETHANE	(2)	EW005197	EW005198			
*TRIHALOMETHANES	(1)	EW005195				
*TRIS (2, 3-DIBROMOPROPYL) PHOSPHATE	(1)	EW005142				
*TROUBLESHOOTING	(2)	EW005037	EW005053			
*TUBE SETTLERS	(1)	EW005060				
*TURBIDITY	(2)	EW004842	EW004997			
TURBIDITY	(4)	EW004464	EW005014	EW005185	EW005198	
*ULTRATRACE METAL ANALYSIS	(1)	EW004513				
*ULTRAVIOLET	(1)	EW004681				
*ULTRA VIOLET LIGHT	(1)	EW005071				
ULTRAVIOLET LIGHT ABSORPTION	(1)	EW005198				
*ULTRAVIOLET RADIATION	(1)	EW005172				
*UNITED STATES	(1)	EW005166				
UNITED STATES	(1)	EW004636				

*UNIT PROCESSES (1) EW004919
*UNIVERSITIES (1) EW004576
*URBAN AREAS (10) EW004590 EW004859 EW004861 EW004986 EW004987 EW004998 EW005006 EW005012 EW005193 EW005471
URBAN AREAS (2) EW004709 EW004718
*URBAN ENVIRONMENT (1) EW005163
*URBAN PROBLEMS (1) EW005039
*URBAN RENEWAL (1) EW005039
*UTILITIES (40) EW004590 EW004593 EW004594 EW004596 EW004710 EW004711 EW004713 EW004714 EW004715 EW004716 EW004717 EW004718 EW004720 EW004759 EW004854 EW004863 EW004865 EW004867 EW004868 EW004869 EW004870 EW004871 EW004872 EW004873 EW004920 EW004922 EW004923 EW004925 EW005000 EW005002 EW005004 EW005005 EW005007 EW005050 EW005161 EW005162 EW005312 EW005319 EW005475 EW005476
UTILITIES (25) EW004469 EW004555 EW004595 EW004597 EW004600 EW004636 EW004709 EW004721 EW004754 EW004757 EW004858 EW004859 EW004918 EW004919 EW004921 EW004924 EW004996 EW005006 EW005049 EW005166 EW005179 EW005195 EW005309 EW005315 EW005478
*UTILITY MANAGEMENT (1) EW005477
VALUES (1) EW004561
*VALVES (3) EW004049 EW005020 EW005025
VALVES (2) EW005023 EW005476
VARIABLE SPEED PUMPS (1) EW005270
*VEGETABLE INDUSTRY (1) EW005105
*VEHICLES (1) EW005041
*VELOCITY (1) EW004719
VIDEOCASSETTES (1) EW005075
VIDEOTAPE CASSETTES (1) EW005259
*VINYLIDENE CHLORIDE (1) EW005143
VINYLRESINS (1) EW005143
VIRGINIA (1) EW004847
VIRUSES (1) EW005100
VOCATIONAL EDUCATION (1) EW005259
WAGES (1) EW004751
*WASHINGTON (1) EW005006
*WASTE DISPOSAL (73) EW003560 EW004059 EW004464 EW004471 EW004528 EW004552 EW004557

	EW004585	EW004588	EW004593	EW004594	EW004595	EW004596	EW004683	EW004690
	EW004709	EW004710	EW004711	EW004712	EW004720	EW004752	EW004753	EW004755
	EW004757	EW004758	EW004759	EW004792	EW004858	EW004864	EW004866	EW004867
	EW004868	EW004869	EW004870	EW004871	EW004872	EW004873	EW004898	EW004949
	EW004958	EW004970	EW004988	EW004990	EW004999	EW005001	EW005002	EW005003
	EW005004	EW005005	EW005013	EW005024	EW005026	EW005027	EW005028	EW005029
	EW005030	EW005032	EW005035	EW005040	EW005049	EW005063	EW005067	EW005092
	EW005093	EW005094	EW005099	EW005100	EW005105	EW005118	EW005165	EW005179
	EW005264	EW005310						
WASTE DISPOSAL	(17)	EW004469	EW004751	EW004754	EW004756	EW004847	EW004947	EW004959
	EW004967	EW004985	EW004986	EW005101	EW005109	EW005110	EW005159	EW005183
	EW005267	EW005317						
WASTE HEAT BOILERS	(1)	EW005267						
*WASTES	(7)	EW004720	EW004871	EW004873	EW005001	EW005002	EW005004	EW005035
WASTES	(12)	EW004711	EW004712	EW004752	EW004866	EW004867	EW004868	EW004869
	EW004870	EW004958	EW004999	EW005005	EW005007			
WASTES DISPOSAL	(1)	EW004982						
*WASTE STABILIZATION LAGOONS	(1)	EW004710						
*WASTE TREATMENT	(2)	EW004777	EW005105					
WASTE TREATMENT	(1)	EW004569						
*WASTE UTILIZATION	(1)	EW004970						
WASTE UTILIZATION	(1)	EW005001						
*WASTEWATER	(19)	EW004640	EW004880	EW004916	EW005095	EW005097	EW005111	EW005144
	EW005167	EW005170	EW005171	EW005172	EW005268	EW005308	EW005309	EW005311
	EW005312	EW005314	EW005315	EW005320				
WASTEWATER	(4)	EW004758	EW005096	EW005101	EW005166			
*WASTEWATER COLLECTION	(12)	EW004052	EW004058	EW004595	EW004708	EW004709	EW004917	EW004999
	EW005024	EW005025	EW005032	EW005158	EW005182			
WASTEWATER COLLECTION	(1)	EW005056						
*WASTEWATER EFFLUENTS	(1)	EW005269						
WASTEWATER QUALITY	(1)	EW005144						
*WASTEWATER TREATMENT	(154)	EW003235	EW003804	EW004052	EW004053	EW004054	EW004055	EW004056
	EW004057	EW004370	EW004501	EW004528	EW004552	EW004557	EW004584	EW004585
	EW004588	EW004593	EW004594	EW004596	EW004600	EW004636	EW004638	EW004639
	EW004640	EW004643	EW004653	EW004677	EW004678	EW004680	EW004681	EW004682
	EW004684	EW004686	EW004687	EW004688	EW004689	EW004690	EW004691	EW004704
	EW004707	EW004709	EW004710	EW004711	EW004712	EW004751	EW004754	EW004756
	EW004757	EW004759	EW004777	EW004841	EW004843	EW004847	EW004849	EW004850
	EW004858	EW004864	EW004866	EW004867	EW004868	EW004869	EW004870	EW004873
	EW004898	EW004916	EW004917	EW004932	EW004943	EW004947	EW004949	EW004973
	EW004980	EW004983	EW004985	EW004988	EW004990	EW004996	EW005002	EW005003
	EW005004	EW005005	EW005007	EW005013	EW005024	EW005025	EW005026	EW005027
	EW005029	EW005030	EW005031	EW005037	EW005042	EW005051	EW005053	EW005056
	EW005058	EW005059	EW005060	EW005061	EW005062	EW005063	EW005064	EW005065
	EW005067	EW005068	EW005070	EW005094	EW005099	EW005100	EW005109	EW005110

		EW005112 EW005122 EW005125 EW005126 EW005127 EW005145 EW005155 EW005156 EW005157 EW005165 EW005166 EW005167 EW005169 EW005170 EW005171 EW005172 EW005173 EW005174 EW005175 EW005176 EW005180 EW005183 EW005184 EW005259 EW005264 EW005265 EW005266 EW005267 EW005269 EW005285 EW005307 EW005308 EW005309 EW005310 EW005311 EW005312 EW005314 EW005317 EW005319 EW005320 EW005463 EW005464 EW005473
WASTEWATER TREATMENT	(16)	EW004058 EW004469 EW004752 EW004851 EW004871 EW004880 EW004982 EW005040 EW005066 EW005105 EW005144 EW005178 EW005179 EW005270 EW005482 EW005483
*WASTEWATER TREATMENT PLANTS	(1)	EW005321
*WATER	(1)	EW004675
WATER	(1)	EW005146
*WATER ANALYSIS	(5)	EW003694 EW004658 EW005095 EW005102 EW005313
*WATER ASSESSMENT	(1)	EW005146
*WATER AUTHORITY	(1)	EW004918
*WATER CHEMISTRY	(1)	EW004737
*WATER COLLECTION	(1)	EW004746
*WATER CONDUITS	(1)	EW005472
*WATER CONSERVATION	(2)	EW004705 EW005145
*WATER CONSUMPTION	(2)	EW005194 EW005479
*WATER CONVEYANCE SYSTEMS	(1)	EW005470
*WATER COSTS	(1)	EW005145
*WATER DEMAND	(3)	EW005193 EW005194 EW005479
WATER DEMAND	(1)	EW004590
WATER DEMANDS	(1)	EW004469
*WATER DISPOSAL	(1)	EW005007
*WATER DISTRIBUTION	(29)	EW004047 EW004048 EW004049 EW004360 EW004364 EW004597 EW004718 EW004719 EW004721 EW004853 EW004855 EW004920 EW004921 EW004922 EW004925 EW004981 EW004986 EW005000 EW005008 EW005018 EW005020 EW005021 EW005022 EW005023 EW005039 EW005476 EW005477 EW005478 EW005480
WATER DISTRIBUTION	(1)	EW005470
WATER EROSION	(1)	EW004967
*WATER INJECTION	(1)	EW005062
*WATER MAINS	(5)	EW004716 EW004994 EW005018 EW005039 EW005050
WATER MAINS	(1)	EW005054
*WATER MEASUREMENT	(1)	EW004415
WATER METERS	(1)	EW004051

*WATER POLLUTION	(30)	EW004570	EW004645	EW004722	EW004859	EW004864	EW004892	EW004968
	EW005093	EW005095	EW005096	EW005097	EW005101	EW005108	EW005122	EW005123
	EW005124	EW005125	EW005126	EW005127	EW005131	EW005132	EW005136	EW005138
	EW005140	EW005141	EW005142	EW005283	EW005285	EW005318	EW005319	
WATER POLLUTION	(16)	EW003694	EW004364	EW004501	EW004552	EW004631	EW004858	EW004872
	EW005091	EW005094	EW005129	EW005134	EW005135	EW005137	EW005139	EW005171
	EW005473							
*WATER POLLUTION CONTROL	(82)	EW003809	EW004058	EW004469	EW004528	EW004536	EW004555	EW004628
	EW004633	EW004636	EW004674	EW004854	EW004859	EW004864	EW004872	EW004917
	EW004942	EW004949	EW004954	EW004957	EW004966	EW004967	EW004969	EW004982
	EW004985	EW004987	EW004996	EW004997	EW005004	EW005014	EW005015	EW005016
	EW005017	EW005024	EW005025	EW005026	EW005027	EW005028	EW005029	EW005030
	EW005031	EW005032	EW005033	EW005036	EW005042	EW005057	EW005061	EW005065
	EW005079	EW005080	EW005084	EW005088	EW005101	EW005102	EW005106	EW005115
	EW005116	EW005122	EW005123	EW005124	EW005125	EW005126	EW005127	EW005131
	EW005132	EW005134	EW005135	EW005136	EW005137	EW005138	EW005139	EW005140
	EW005141	EW005146	EW005164	EW005166	EW005258	EW005271	EW005275	EW005276
	EW005280	EW005318	EW005474					
WATER POLLUTION CONTROL	(25)	EW003235	EW003560	EW004052	EW004053	EW004054	EW004055	EW004056
	EW004057	EW004360	EW004405	EW004501	EW004584	EW004715	EW004720	EW004916
	EW004943	EW004947	EW004980	EW004981	EW004993	EW005013	EW005062	EW005105
	EW005142	EW005151						
WATER POLLUTION CONTROL ACT	(1)	EW004916						
*WATER QUALITY	(69)	EW003560	EW004043	EW004044	EW004045	EW004046	EW004051	EW004060
	EW004364	EW004536	EW004569	EW004624	EW004625	EW004626	EW004627	EW004628
	EW004630	EW004631	EW004632	EW004633	EW004634	EW004635	EW004638	EW004639
	EW004645	EW004649	EW004658	EW004679	EW004715	EW004716	EW004841	EW004863
	EW004892	EW004919	EW004920	EW004921	EW004922	EW004923	EW004925	EW004945
	EW004954	EW004955	EW004956	EW004957	EW004966	EW004968	EW004969	EW004984
	EW004987	EW004991	EW004997	EW005022	EW005038	EW005045	EW005047	EW005079
	EW005080	EW005095	EW005096	EW005108	EW005146	EW005192	EW005195	EW005196
	EW005197	EW005199	EW005463	EW005464	EW005473	EW005475		
WATER QUALITY	(21)	EW004057	EW004360	EW004590	EW004675	EW004677	EW004681	EW004717
	EW004732	EW004864	EW004943	EW004973	EW005004	EW005048	EW005057	EW005058
	EW005102	EW005112	EW005285	EW005321	EW005481	EW005484		
*WATER QUALITY STANDARDS	(1)	EW004941						
*WATER RATES	(5)	EW004463	EW004705	EW004713	EW004732	EW005193		
*WATER RECLAMATION	(1)	EW005046						
*WATER RESOURCES	(64)	EW004050	EW004558	EW004561	EW004598	EW004600	EW004639	EW004679
	EW004709	EW004714	EW004715	EW004716	EW004717	EW004718	EW004719	EW004720
	EW004721	EW004860	EW004861	EW004874	EW004892	EW004898	EW004918	EW004919
	EW004920	EW004921	EW004922	EW004923	EW004924	EW004925	EW004945	EW004956
	EW004980	EW004981	EW004982	EW004983	EW004984	EW004986	EW004987	EW004988
	EW004998	EW005000	EW005006	EW005007	EW005010	EW005011	EW005012	EW005014
	EW005016	EW005017	EW005018	EW005019	EW005021	EW005022	EW005023	EW005034
	EW005045	EW005046	EW005049	EW005145	EW005163	EW005193	EW005463	EW005464
	EW005470							
WATER RESOURCES	(29)	EW004043	EW004044	EW004045	EW004046	EW004047	EW004048	EW004049
	EW004051	EW004059	EW004060	EW004415	EW004469	EW004594	EW004597	EW004638

		EW004710 EW004758 EW004957 EW004969 EW004985 EW004995 EW005020 EW005036 EW005044 EW005159 EW005192 EW005258 EW005269 EW005271
*WATER REUSE	(2)	EW005045 EW005046
*WATER RUNOFF	(3)	EW004859 EW004860 EW004861
WATER RUNOFF	(1)	EW005471
*WATER SHEDS	(1)	EW004861
*WATERSHEDS	(2)	EW005012 EW005471
WATER SHEDS	(1)	EW005258
WATERSHEDS	(1)	EW004945
*WATER SOFTENING	(2)	EW005016 EW005317
WATER SOFTENING	(1)	EW004598
*WATER STANDARDS	(1)	EW004536
*WATER STORAGE	(5)	EW004050 EW004685 EW004986 EW005012 EW005021
WATER STORAGE	(2)	EW004746 EW005044
*WATER SUPPLY	(80)	EW004043 EW004045 EW004046 EW004047 EW004048 EW004049 EW004050 EW004051 EW004059 EW004360 EW004364 EW004463 EW004536 EW004590 EW004597 EW004600 EW004658 EW004675 EW004679 EW004685 EW004705 EW004713 EW004714 EW004717 EW004718 EW004719 EW004721 EW004732 EW004842 EW004848 EW004854 EW004856 EW004863 EW004918 EW004919 EW004920 EW004921 EW004924 EW004925 EW004955 EW004956 EW004973 EW004981 EW004982 EW004983 EW004984 EW004986 EW004995 EW005006 EW005008 EW005010 EW005014 EW005015 EW005016 EW005017 EW005018 EW005019 EW005020 EW005022 EW005023 EW005034 EW005038 EW005039 EW005042 EW005044 EW005048 EW005050 EW005055 EW005145 EW005160 EW005161 EW005192 EW005193 EW005194 EW005195 EW005285 EW005470 EW005472 EW005477 EW005478
WATER SUPPLY	(14)	EW004849 EW004922 EW004969 EW005021 EW005043 EW005054 EW005057 EW005058 EW005059 EW005060 EW005062 EW005144 EW005159 EW005196
*WATER SYSTEMS	(1)	EW004856
WATER SYSTEMS	(1)	EW004989
*WATER TANKS	(1)	EW004050
*WATER TECHNOLOGY	(1)	EW004370
*WATER TREATMENT	(71)	EW003804 EW004043 EW004044 EW004045 EW004046 EW004360 EW004405 EW004464 EW004558 EW004584 EW004597 EW004598 EW004600 EW004638 EW004675 EW004682 EW004684 EW004720 EW004722 EW004848 EW004852 EW004863 EW004865 EW004919 EW004920 EW004922 EW004923 EW004924 EW004955 EW004956 EW004980 EW004982 EW004984 EW004987 EW004989 EW004991 EW004993 EW004995 EW005015 EW005016 EW005017 EW005018 EW005019 EW005020 EW005021 EW005022 EW005023 EW005034 EW005043 EW005047 EW005048 EW005054 EW005055 EW005144 EW005168 EW005181 EW005185 EW005192 EW005195 EW005196 EW005197 EW005198 EW005259 EW005315 EW005464 EW005475 EW005480 EW005481 EW005482 EW005483 EW005484
WATER TREATMENT	(4)	EW004585 EW004588 EW005014 EW005199
*WATER TREATMENT PLANTS	(1)	EW004919

WATER USE (3) EW005044 EW005194 EW005479
*WATER UTILITIES (13) EW004463 EW004981 EW004982 EW004986 EW004987 EW005014 EW005016 EW005017 EW005018 EW005019 EW005020 EW005021 EW005023
WATER UTILITIES (1) EW004984
*WATER WELLS (1) EW005006
*WATERWELLS (1) EW004679
WEIR DESIGN (1) EW004704
WELL CONSTRUCTION (1) EW005463
*WELLS (1) EW004050
WELLS (2) EW004968 EW005021
*WET OXIDATION (1) EW005310
WIND EROSION (1) EW004967
WISCONSIN (1) EW004683
*WORK SCHEDULES (1) EW004865
*YEASTS (1) EW005069
*ZAMBIA (1) EW004849
*ZERO DISCHARGE (1) EW005269
*ZINC (1) EW004633